

EVIDENTIARY HEARING
BEFORE THE
CALIFORNIA ENERGY RESOURCES CONSERVATION
AND DEVELOPMENT COMMISSION

In the Matter of:)	
)	
Application for Certification)	Docket No.
for Mirant Corporation's)	00-AFC-4
Potrero Power Plant)	
Unit 7 Project)	
_____)	

VOLUME IV

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William Keese, Commissioner, Associate Member

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Mike Ringer

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P R O C E E D I N G S

10:07 a.m.

COMMISSIONER PERNELL: Good morning.

This is the continuation of the second set of evidentiary hearings for the proposed Potrero Unit Seven project. My name is Commissioner Pernell. I'm the presiding member of the committee. My associate member is Commissioner Keese.

To my right is our hearing officer, Stan Valkosky. To his right is Commissioner Keese's advisor, Mike Smith.

At this time I'll have the parties introduce themselves and their team for today, starting with the applicant.

MR. CARROLL: Yes, good morning. Mike Carroll, Latham and Watkins, on behalf of Mirant. Here with me today is Mark Harrer with Mirant, Dale Shileikis, and Kelly Haggerty, and John Lague with URS, Michael Corbett and Denise Bradley, also with URS, and Marcus Young with Singer and Associates.

COMMISSIONER PERNELL: Good morning.

Staff, please.

MR. WESTERFIELD: I'm Bill Westerfield, representing the CEC staff, and with me this

1 morning is Mark Pryor, who is the project manager
2 for this Unit Seven project. Also, Rick Tyler,
3 who will be a witness today on the subject of
4 hazardous materials, and Mike Ringer on hazardous
5 waste management.

6 COMMISSIONER PERNELL: Good morning.

7 Intervenors, starting with the City and
8 County of San Francisco.

9 MS. MINOR: Good morning. Jackie Minor
10 with the City Attorney's Office representing the
11 City and County of San Francisco. We have with us
12 today three cultural resources witnesses, who will
13 testify as soon as we're ready to get started
14 officially: Dr. Paul Groth, Christopher Ver
15 Planck, and Charles Chase. Also with us today is
16 Mark Paez with the San Francisco Court, and Andria
17 Pomponi, a consultant with the City from the firm
18 of Camp Dresser and McKee; Joanna Woolman from our
19 intern program in the City Attorney's Office is
20 back today, and also two of our witnesses who did
21 not get my voice mail message late last night
22 saying don't show up, we're behind schedule. So
23 we have one of our hazardous materials witnesses,
24 Steve Radis, as well as Dr. John Fetzner, one of
25 our waste management witnesses, in the audience

1 this morning.

2 COMMISSIONER PERNELL: Thank you. Good
3 morning.

4 MR. RAMO: Alan Ramo, representing Our
5 Children's Earth and Southeast Alliance for
6 Environmental Justice.

7 MR. ROSTOV: William Rostov representing
8 Communities for a Better Environment.

9 COMMISSIONER PERNELL: Okay. Any other
10 intervenors? Any elected officials? Anyone
11 representing agencies this morning?

12 Seeing none, and our public adviser is
13 here. Would you just come down and introduce
14 yourself, please, for those who don't know you
15 from yesterday.

16 MS. MENDONCA: Good morning. This is
17 Roberta Mendonca, the Energy Commission public
18 adviser, and I'll be glad to assist any of you
19 with questions about the process.

20 COMMISSIONER PERNELL: And now I'll turn
21 the hearing over to our hearing officer,
22 Mr. Valkosky.

23 HEARING OFFICER VALKOSKY: Thank you,
24 Commissioner.

25 Welcome to our second 14-hour session.

1 I hope I'm joking.

2 (Laughter.)

3 HEARING OFFICER VALKOSKY: Yesterday we
4 concluded with the cultural resource witnesses
5 from applicant and staff. We will now proceed
6 with the direct testimony on behalf of the City
7 and County of San Francisco.

8 Ms. Minor.

9 MS. MINOR: Thank you. We have three
10 witnesses: Dr. Paul Groth, Christopher Ver
11 Planck, and Charles Chase. And we will have them
12 testify as a panel.

13 THE REPORTER: Gentlemen, if you could
14 kindly raise your right hands.

15 Whereupon,

16 PAUL GROTH, CHRISTOPHER VER PLANCK,
17 and CHARLES CHASE

18 Were called as witnesses herein and, after first
19 being duly sworn, were examined and testified as
20 follows:

21 MS. MINOR: The order of our witnesses
22 will be first Dr. Paul Groth, then Christopher Ver
23 Planck, and then Charles Chase. We will have
24 direct testimony for each of them, and then we
25 will tender them for cross-examination.

1 And I think I'll do something now that
2 relates to Mr. Ver Planck's testimony so that I
3 don't have to get up and do this. We are going to
4 substitute color photos for the exhibits that were
5 attached to Mr. Ver Planck's testimony.

6 THE REPORTER: Ms. Minor, so these are
7 just direct replacements, albeit color?

8 MS. MINOR: They are, and when we get
9 there you can let me know if you want to make the
10 packet a new exhibit number or just kind of
11 substitute them for what is there.

12 Dr. Groth, are you ready?

13 THE WITNESS: Yes.

14 MS. MINOR: Okay, good.

15 DIRECT EXAMINATION

16 BY MS. MINOR:

17 Q Would you state your name, please, for
18 the record, and you've also indicated that there
19 is a preliminary statement that you'd like to
20 make?

21 A My name is Paul Groth, and I should warn
22 the people here today that because I stutter,
23 there may be some uncharacteristically long pauses
24 in my statement. I hope it won't lengthen the
25 proceedings substantially.

1 And I also have four corrections.

2 Should I give them at this time?

3 Q Yes, please.

4 A In my written testimony, on page five,
5 line seven, "southwest" should be "southeast," so
6 that line says "became the PG&E site to the
7 southeast."

8 On page six, line five, strike the
9 words, "Henry Scotts." Just delete the words,
10 "Henry Scotts."

11 And on page seven there are two
12 corrections: Line three, the first word should be
13 "was," not "were." Sorry about that bird cage.
14 And line five, the word "crowed" should be
15 "crowded." Makes more sense: "Thirty saloons
16 crowded the block."

17 Q Dr. Groth, are there any further
18 corrections to your testimony?

19 A No, that's all.

20 Q Okay. Subject to the corrections that
21 you have just made on the record, does the
22 testimony that you filed on July 10th in this
23 proceeding represent the testimony, a true and
24 accurate account of your testimony?

25 A Yes, it does.

1 Q Would you please summarize your
2 professional qualifications and educational
3 background.

4 A I am an associate professor of
5 architectural history, urban history, and cultural
6 landscape history in the department of
7 architecture and the department of geography at
8 the University of California at Berkeley. I have
9 a professional architecture degree from North
10 Dakota State University, and a Ph.D. in historical
11 human geography from the University of California
12 at Berkeley. I've been study the historical
13 cultural landscapes of the United States for 27
14 years, and am considered a national expert in the
15 history of America's ordinary urban buildings,
16 particularly industrial sites, workers' housing,
17 residential hotels, and how these sites are
18 interrelated with social history.

19 I've served as a historical consultant
20 to CalTrans, the City of San Francisco, the
21 Foundation for San Francisco's Architectural
22 Heritage, the State Historical Society of
23 Minnesota, and the Department of Housing,
24 Preservation and Development of New York City.

25 I've published widely in the journals

1 and academic publishing houses in the United
2 States, and am a past national president of the
3 Vernacular Architecture Forum, a 900-member group
4 of preservationists and historians devoted to the
5 study of ordinary buildings and landscapes in
6 North America.

7 Q Would you amplify further your
8 qualifications as it relates to industrial
9 landscapes.

10 A I began studying factories seriously in
11 1975 while teaching at the New Jersey School of
12 Architecture, and applied to Berkeley's geography
13 department specifically to study the history of
14 ordinary workplaces.

15 I first saw the Union Ironworks and the
16 PG&E power plant in 1982. I have to admit that
17 until then, I had not imagined that a large intact
18 industrial district had survived San Francisco's
19 1906 earthquake and fire. At about the same time,
20 in the research for my doctoral dissertation at
21 Berkeley, I mapped all types of residential hotels
22 in San Francisco from 1880 to 1930, and the
23 Michigan Street, Irish Hill, and Dogpatch
24 districts literally popped out as significant
25 concentrations of rooming houses and cheap lodging

1 houses for Potrero Point industries, clear proof
2 of an important historical pool of blue collar
3 labor.

4 In 1986, spurred by these Potrero Point
5 subjects, I applied and was accepted as a
6 postdoctoral fellow at the National Museum of
7 American History of the Smithsonian Institution in
8 Washington, DC. At the Smithsonian, I studied
9 industrial history with Dr. Gary Kulik, a noted
10 historian of New England textile mills, and with
11 Robert Vogel, a co-founder of the Society for
12 Industrial Archaeology.

13 Subsequently at Berkeley I've taught
14 graduate seminars on American industrial buildings
15 built after 1870, as well as the social and
16 architectural history of San Francisco and West
17 Oakland factories and workers' housing. I've also
18 supervised several masters' theses and doctoral
19 dissertations relating to these topics.

20 My own research has focused primarily on
21 the machine shop building; that's building 113 of
22 the Union Ironworks. For comparison with Potrero
23 Point, I'm also studying West Oakland, although
24 its most important employment sites, the Southern
25 Pacific Railroad yard and the Moore shipyard, are

1 long gone.

2 Q What is the significance of industrial
3 sites in the US?

4 A Today most Americans appreciate Silicon
5 Valley, and the importance of a semiconductor
6 industry, its venture capitalists and its various
7 ranks of laborers as being an important story.
8 From the 1870s to the 1940s, equally important
9 were America's burgeoning new concentrations of
10 factories. Factories were centers of new
11 technology.

12 In these large industrial workplaces,
13 American industrialists, engineers, and workers
14 hammered out what we now know as American
15 technological know-how and world mastery of
16 machinery. Factories essentially called into
17 being the giant industrial city.

18 Large industrial workplaces drove the
19 post-1870 explosion of America's urban population,
20 including both the migration from rural and small-
21 town people to white collar jobs in the city, and
22 the immigration to the United States of people
23 from all over the globe for blue collar jobs.

24 Factories were also crucibles of
25 culture. Nationally, factory workplaces were

1 battlegrounds over the imposition of the
2 Protestant work ethic on often non-Protestant
3 immigrants. Factory work drove the adoption of
4 American time consciousness, and the spread of the
5 idea of efficiency, also known as productivity
6 these days, to become something like a national
7 religion.

8 Now, obviously, not every workplace
9 merits preservation. But in the set of preserved
10 places, in every major metropolitan area, it is
11 essential to conserve the history of the rank and
12 file workers, both men and women, whose long hours
13 of work, usually under noisy, hot, smoky
14 conditions, are as significant as the labor of
15 capitalists and their engineers working in the
16 main office.

17 In factory settings, in nearby union
18 halls and workers' clubs, laborers in large
19 workplaces fought for important political and
20 economic rights. By their labor, workers made
21 their own contributions to American material
22 culture and progress. And where the products of a
23 workplace are regionally and nationally
24 significant, then the preservation of the
25 workplace becomes particularly significant and

1 important.

2 However, in spite of the importance of
3 industrial sites, surveys for the National
4 Register and other preservation efforts have often
5 overlooked important industrial sites.

6 Q In your testimony you indicate that
7 there are some inherent products in identifying
8 industrial sites, and in particular, you discuss
9 issues related to integrity. During testimony on
10 Monday the 22nd, there was a lot of focus on the
11 issue of integrity.

12 Would you please clarify your view as to
13 the inherent problems as they relate to integrity
14 in identifying industrial sites.

15 A Surely. The most easily identified
16 National Register sites and districts are the
17 kinds of places for which the Register was
18 originally intended: spectacular architectural
19 design and the homes of famous leaders. But with
20 factories, the things that delight most
21 architectural historians, fine details and
22 dramatic style, are rare. Sheer huge scale and
23 forthright honesty of materials and forms are
24 often the most one can hope for in the design of
25 industrial sites.

1 So, thus, integrity, which is quite easy
2 to identify with high-style design, is with
3 factories much more nuanced. Often, in fact,
4 integrity is the wrong question to ask when
5 judging the preservation importance of a factory
6 setting.

7 Economically successful industrial sites
8 are messy and complicated. Their building
9 complexes typically grow with many rapid
10 accretions. Most factory complexes are not built
11 in any one year, like a mansion or an office
12 tower. Rather, factories are begun in a
13 particular year and continue to grow and change.
14 Additions and remodeling, even abandonment of
15 older buildings can be much more significant than
16 the original structures.

17 On industrial sites, the disciplines of
18 labor history, social history, and business
19 history are probably more important for evaluation
20 than architectural design that such experts are
21 rarely the ones doing the National Register
22 evaluations.

23 Should I go on there?

24 Q No, I think that that's an adequate
25 response, thank you.

1 A Okay.

2 Q You indicate that there are four things
3 that tie together the industries on Potrero Point.
4 Would you please list those four things.

5 A The four things, most important things,
6 and there are others, would be, first, the clear
7 boundary of deep-water access; second, the links
8 between Potrero's famous industrialists on Potrero
9 Point; third, the development of a single-use
10 district for heavy industry, one of the first on
11 the West Coast of the United States; and fourth,
12 the interlocking histories of labor and
13 neighborhoods in Potrero Point.

14 Q Okay. And, Dr. Groth, your testimony
15 provides sufficient detail, with respect to each
16 of the four themes. I'm going to ask you to take
17 each theme and say just a couple of sentences to
18 summarize why that particular theme is important.

19 A Okay. Well, the first theme is the
20 reliance of all the industries on Potrero Point on
21 deep-water frontage and Pacific Ocean links. The
22 water line, in fact, defines the three sides of
23 the district very clearly. I think that's enough
24 on that. But all the plants on Potrero Point
25 relied on Pacific Rim and oceangoing connections.

1 The second theme, the small group of
2 famous California capitalists who developed the
3 area, is -- Potrero Point gives us a great place
4 to really see how a small handful of San Francisco
5 capitalists worked together, both officially and
6 unofficially, both on the books and off the books,
7 to make an industrial district happen.

8 It starts with James Fair who, in 1866,
9 brings the Pacific Steel Rolling Mills to the
10 site. In 1881 Claus Spreckles establishes his
11 Pacific -- rather, his San Francisco sugar
12 refinery on the Southern third of Potrero Point.
13 Two years later, the owners of the Union Ironworks
14 move their entire operation from the south of
15 Market to the northern third of Potrero Point.

16 And the two major families behind the
17 Union Ironworks were two sets of brothers, the
18 Donahues and the Scotts. In fact, the profits
19 from the early Union Ironworks in the south of
20 Market had fueled Peter Donahue's founding of San
21 Francisco Gas of Electric, which later becomes
22 PG&E. And later, the Scott brothers are very
23 important in Union Ironworks as they move it down
24 to Potrero Point.

25 The Scotts and the owners of the Rolling

1 Mills in the 1880s co-planned major expansions at
2 the Rolling Mill together. The Scotts were major
3 buyers of the Rolling Mill Steel, and the only
4 railroad into the steel mill ran directly through
5 the middle of the Union Ironworks. So what I'm
6 trying to make the case for here is how
7 interlocking everything happening on Potrero Point
8 was.

9 When Spreckles in 1901-1902 builds his
10 huge station A power plant, he quickly sells it to
11 San Francisco Gas and Electric, but if you look at
12 Sanborn maps as late as 1919 at Potrero Point,
13 it's clear that on the same lots, Spreckles sugar
14 tanks or plants, for the sugar plant, and PG&E
15 tanks are on the same sites. So all of these
16 industries are working together.

17 Q And the third theme?

18 A The third theme is the coordinated
19 transformation over a single generation of the
20 entire peninsula into a large single-use
21 industrial area for heavy and polluting industry.
22 The major Potrero Point owners did all this
23 decades before legal zoning was adopted in the
24 United States as a method for solving land use
25 conflicts between industrial, residential, and

1 retail areas.

2 Between 1899 and 1920, some combination
3 of Potrero's industrial leaders worked diligently
4 and probably secretly to assemble over 100 19th-
5 Century lots and privately owned wooden cottages,
6 roadhouses, rooming houses, and saloons in the
7 four blocks on the west side of the district.

8 Over 70 of the 100 assembled parcels
9 were east of Michigan Street, many on top of what
10 was then Irish Hill. Industrialists saw the hill
11 itself as an obstacle and worked for decades to
12 blast away as much of it as possible. They didn't
13 want the kind of crowded and mixed land uses they
14 had to contend with in areas like the south of
15 Market or the north waterfront.

16 And they wanted to eliminate Irish Hill
17 for other reasons as well. The residential and
18 retail neighbors complained about noise and
19 pollution and impeded industrial expansion, and
20 eradicating Irish Hill and the mixed use blocks on
21 the western side of the district was also clearly
22 motivated as a way to close down as many as
23 possible of the working people's saloons, which
24 were union hotbeds and always, union or not, zones
25 of opposition to management.

1 Before 1900, over 30 saloons -- 38 by my
2 recent --

3 COMMISSIONER PERNELL: Excuse me, can I
4 stop you there?

5 THE WITNESS: Yes.

6 COMMISSIONER PERNELL: Let me make sure
7 I got this. You mentioned four different elements
8 that kind of connect Potrero Hill as an industrial
9 district.

10 THE WITNESS: Yes.

11 COMMISSIONER PERNELL: And one of them
12 is the waterways --

13 THE WITNESS: Correct.

14 COMMISSIONER PERNELL: -- and the other
15 is the fact that all of the various businesses are
16 interlocking so that it's one cohesive district.

17 THE WITNESS: Mm-hmm.

18 COMMISSIONER PERNELL: The third one I
19 have is the fact that the workers and the
20 neighborhoods surrounding the district are
21 somewhat interlocking?

22 THE WITNESS: That's actually my fourth
23 point.

24 COMMISSIONER PERNELL: Okay. What is
25 your missing one?

1 THE WITNESS: The third one is --

2 COMMISSIONER PERNELL: What I'd like to
3 do, if at all possible, is just have you list
4 those, and not really go through all of the --

5 THE WITNESS: All of the detail?

6 COMMISSIONER PERNELL: -- all of the
7 details.

8 THE WITNESS: Okay.

9 COMMISSIONER PERNELL: What we're
10 looking for is just facts and not necessarily the
11 whole, although it's very interesting, the
12 history, but I've been criticized for keeping this
13 panel here for 14 hours, and I don't want to do
14 that again today.

15 THE WITNESS: Okay.

16 MS. MINOR: Commissioner Pernell, I was
17 letting Dr. Groth do some of the background and
18 some of this repeated in Mr. Ver Planck's
19 testimony. We were not going to do it then, but
20 we will step it up and go through this very
21 quickly.

22 COMMISSIONER PERNELL: Okay, thank you.

23 BY MS. MINOR:

24 Q And if you can clarify the third point
25 and then restate the fourth point, I think the

1 record will be clear.

2 A Sure. Well, the third point is
3 basically that the actions of the landowners on
4 Potrero Point, working together, shows the active
5 and cooperative roles of PG&E and Union Ironworks
6 in shaping the land use of the whole district, in
7 particular. I think that's the most important
8 thing to say there, and I won't go into all of the
9 details.

10 I should apologize. I'm used to hour-
11 and-a-half lectures at Berkeley, so --

12 (Laughter.)

13 THE WITNESS: The fourth theme is this
14 theme that the -- Although industrialists fought
15 to eliminate conflicting residential land uses,
16 before 1945 in particular, blue collar workers
17 sought to live within close working distance of
18 multiple places of employment. So Potrero Point's
19 labor history is closely related to the
20 residential districts of Irish Hill, while it
21 lasted, Dogpatch, and Potrero Hill.

22 So quite literally, the human lives of
23 workers knit together at the Potrero Point
24 district even more than the interlocking
25 directorates of its factory owners. I think

1 that's the most important thing.

2 So the residents are the people -- the
3 skilled people working at the Union Ironworks, the
4 women working at the cannery, and then children,
5 and the newest people and working at the roughest
6 jobs, they're the ones really tying the whole
7 peninsula together.

8 BY MS. MINOR:

9 Q The final question from your testimony,
10 you indicate that Potrero Point industrial
11 district really has national significance. And in
12 your testimony we underscored by way of summary
13 the main findings that support the statement.

14 Can you please just highlight for the
15 record the main summary that will explain why you
16 believe Potrero Point industrial district would
17 have national significance.

18 A Okay. First, this remarkable ensemble
19 of different kinds of industries, all in one
20 united area, are nationally significant, simply
21 because they survive, especially those that
22 predate the 1906 earthquake. And they survive in
23 an accessible location, where visitors, residents,
24 tourists can see them. Thirty years ago, these
25 sites wouldn't have been particularly rare, and

1 today they are.

2 Second, the Potrero Point district is
3 one of the best places in California to tell the
4 essential early chapters of the story of western
5 urban industry as part of mining history and as
6 part of American industrial history in general.
7 Western industrial history has very little study
8 and is woefully under-represented in American
9 history.

10 The West is more than ranching, mining,
11 and oil drilling, and California is much more than
12 gold, oranges, the Beach Boys, and movie-making.
13 And we need to preserve and interpret industrial
14 sites to make this clear. Potrero Point is an
15 excellent place to do that, probably the best
16 place in San Francisco, and probably the best in
17 Northern California.

18 The third theme of national significance
19 is that Potrero Point's historical sites share the
20 important story of production support for the
21 Spanish-American War, World War I, and World War
22 II. And both the war production and the promotion
23 of war were closely tied to the industrialists and
24 the industries on Potrero Point.

25 Fourth, especially the sugar warehouses

1 and Union Ironworks stand as nationally
2 significant reminders of San Francisco's central
3 role in American commercial and military
4 domination of the Pacific Rim since the 1880s.

5 Most importantly, the surviving sites on
6 Potrero Hill are nationally significant,
7 especially as a remarkably preserved ensemble of
8 early heavy industrial plants in a single-use
9 industrial district, one of few such well-
10 preserved districts on the West Coast of the
11 United States.

12 The cannery, historic PG&E structures,
13 sugar warehouses, the rail corridors, and even the
14 remaining bit of Irish Hill all provide important
15 context, integrity of setting and feeling for the
16 Union Ironworks. The juxtaposition of Dogpatch
17 and Potrero Hill are also important contributors.

18 The American West has other early
19 individual industrial sites and other blue collar
20 residential districts; however, Potrero Point's
21 juxtaposition of a large integrated set of
22 industrial workplaces, established 20 years before
23 zoning made such combinations a required pattern,
24 next to intact 19th-Century housing districts is
25 highly significant, not just for San Francisco

1 history, but for the history of all California.

2 Q Thank you. Any further comments at this
3 point, Dr. Groth?

4 A No.

5 MS. MINOR: Thank you.

6 Our next witness is Christopher Ver
7 Planck.

8 BY MS. MINOR:

9 Q Would you state your name, please, for
10 the record, and then indicate if there are any
11 corrections to your testimony.

12 A Christopher Ver Planck. I have two
13 corrections. The first one is on page five of my
14 testimony, line eight, where it says, "zone of
15 heavy industry not seen anywhere else in the
16 West," I would like to add "by 1910" after "West."

17 And the next correction is on page
18 seven, line 26, where I say, "It is my opinion
19 that the historic portion of the Potrero power
20 plant," "power plant" should be changed to
21 "Point."

22 Q So that line would read, "It is my
23 opinion that the historic portion of the Potrero
24 Point"?

25 A Correct.

1 Q Are there any further corrections?

2 A No.

3 Q With the corrections that you have made
4 to your testimony today, does your filed testimony
5 continue to reflect the testimony that you submit
6 in this matter?

7 A Yes.

8 Q Mr. Ver Planck, would you please
9 summarize for us your professional qualifications
10 and educational background.

11 A Surely. I'm an architectural historian
12 at Page and Turnbull, a preservation architecture
13 firm in San Francisco. I have over six years
14 professional experience in the field of
15 architectural history, cultural resources
16 management, etc.

17 Prior to joining Page and Turnbull I
18 worked for San Francisco Architectural Heritage
19 for two years. While at Heritage I worked on
20 numerous efficacy and research projects, including
21 a series of historic resources along San
22 Francisco's northeast waterfront.

23 I have a master's degree in
24 architectural history and historic preservation
25 from the University of Virginia School of

1 Architecture. As a student I worked as the
2 assistant to the building conservator at
3 Montecello for one year.

4 I have published numerous articles in
5 local journals, and also published some book
6 reviews in Vernacular Architectural Forum. I
7 regularly give talks and papers at various
8 conferences, including SAH.

9 Before I came back to California, I was
10 also the Kress Thompkins fellow at HABS/HAER in
11 Washington, DC. And while there, I worked on
12 recording textile mill villages and textile mills
13 in the Chattahoochee River Valley in Georgia.

14 Q Thank you. In your testimony, you
15 commented on the report prepared by Dames and
16 Moore, which is now URS, and indicated that you
17 had several specific areas that you disagreed with
18 the findings of Dames and Moore. What are those
19 areas of disagreement?

20 A Well, I have three major comments about
21 the report, and I will -- in the interest of
22 brevity, I will not duplicate Dr. Groth's
23 testimony. But if you would like me to further
24 elaborate on these points, please let me know.

25 The first point I would like to make is

1 I do not believe that the Dames and Moore report
2 looked at the Potrero power plant in the larger
3 context of other historically significant
4 industries at Potrero Point. And specifically, I
5 don't think enough work was done to establish that
6 what is left of the Potrero does not contribute to
7 a larger potential historic district.

8 MR. WESTERFIELD: I'm sorry, excuse me.
9 I couldn't hear that because the tape was going
10 and it was right in my hear. Could I ask you to
11 repeat what you've just said?

12 THE WITNESS: Surely. I believe that
13 the report, Dames and Moore report, did not look
14 at the Potrero power plant in the larger context
15 of other historically significant industries in
16 Potrero Point and did not address the potential
17 for these sites to comprise an historic district.

18 Dr. Groth established in his testimony
19 that there are several themes that tie together
20 the industries on Potrero Point, including the
21 links between Potrero's industrialists, the
22 development of an unprecedented single-use
23 district for heavy industry, as well as the
24 interlocking histories of labor and industry.

25 Secondly, I do not agree with the

1 report's analysis of the architectural
2 significance of the historic resources on the
3 Potrero power plant site. It is my opinion that
4 the compressor house, meter house, machine shop --
5 otherwise known as the office, and station A are
6 each individually eligible for listing under
7 California Register criteria one and three.

8 Third, I would also disagree with the
9 URS/Dames and Moore report finding that station A
10 does not return historic integrity.

11 BY MS. MINOR:

12 Q Okay. Let's take each of the historic
13 resources, starting with the meter house, then
14 move to the compressor house, and clarify those
15 areas of disagreement with Dames and Moore, and
16 also establish your points that these buildings do
17 have architectural significance.

18 A Okay. In regard to the meter house, it
19 is my opinion that in addition to being eligible
20 for the California Register listing under
21 criterion one, it is also eligible for individual
22 listing under California Register listing
23 criterion three.

24 The meter house is an example of a type
25 and period of American industrial architecture.

1 It's also a very rare surviving example of
2 industrial architecture in San Francisco. In
3 California, especially the Bay Area, where rapid
4 deindustrialization has occurred, most such
5 buildings have been destroyed, as land values are
6 very high, and unutilized lands such as this as
7 consequently redeveloped, such as the North Beach
8 area and other areas in San Francisco where this
9 has happened.

10 The meter house, built in 1914, is
11 especially closely related to the historic machine
12 shop at the Union Ironworks. That's building 113
13 at Pier 70 with load-bearing brick construction,
14 arched windows, steel roof trusses, pilaster
15 buttresses, and gabling walls. See Exhibit C for
16 comparison of the meter house to the machine shop.

17 It is an extremely rare example of a
18 defined building type under criterion three.
19 Although built in 1914, it shows more in common
20 with pre-quake industrial structures in San
21 Francisco and elsewhere in the United States. To
22 my knowledge, there is only one other building in
23 San Francisco outside of the central waterfront
24 that resembles it in any clear and direct way, and
25 that is the California Electric Company building

1 at 16678 Townsend Street, which was built in 1888
2 and partially survived the 1906 earthquake.

3 Q You've referred us to Exhibit C that's
4 attached to your testimony.

5 A Mm-hmm.

6 Q Would you tell us what Exhibit C
7 depicts.

8 A What I've done is I've attached two
9 photographs. The photograph at the top is, of
10 course, the machine shop, building 113 at Union
11 Ironworks. And the bottom photograph is a picture
12 of the meter house.

13 And what I've tried to do is establish
14 the fact that there is a clear and compelling link
15 between these two structures, although the machine
16 shop was built approximately 35 years earlier. I
17 think it illustrates the common industrial
18 architectural language with the pilaster strips
19 that extend up to the eaves, the arched openings,
20 and the gable and walls.

21 The meter house is definitely a much
22 smaller building, but I think it's quite evocative
23 of this particular building type: very simple,
24 very spare architectural ornament, a little
25 cornice molding on the meter house. You can see

1 the machine shop doesn't have much more. In fact,
2 it probably even has a little bit less. You can
3 see the corbel, the pilaster cap over the top of
4 the wall in the upper right-hand corner.

5 COMMISSIONER PERNELL: Would you say
6 that these two buildings would complement each
7 other historically and architecturally, if they
8 were closer together?

9 THE WITNESS: I would say
10 architecturally that they share much in common,
11 but historically they -- aside from the fact that
12 the owners of both of these industries cooperated
13 to a certain extent to create Potrero Point as a
14 single-use industrial site, in terms of their use,
15 they really don't have a whole lot in common with
16 each other. Because, of course, the meter house
17 is related to gas production; the machine shop is
18 a very different use.

19 Q What is the use of the machine shop?

20 A My understanding, and I'm not an expert
21 on this, but my understanding is the machine shop
22 was -- Actually, Dr. Groth could probably shed
23 more light on this. The Union Ironworks had
24 various buildings where various parts of the
25 shipbuilding and other manufacturing took place.

1 And my understanding is this is where bearings and
2 smaller items were manufactured.

3 Q But related to shipbuilding and the
4 maritime industry.

5 A Right.

6 Q Okay, thank you. Now, if you could
7 continue with your rationale for the significance
8 of the compressor house.

9 A Okay. The compressor house, built a
10 decade later in 1924, shares a common vocabulary
11 with other PG&E substations constructed throughout
12 San Francisco and Northern California in the 1910s
13 and 1920s. During this period, PG&E hired a
14 series of prominent San Francisco architects to
15 design electrical substations. Although
16 utilitarian and often windowless buildings, the
17 substations were given a degree of architectural
18 ornamentation in keeping with PG&E's status and
19 power in California. The design of these
20 buildings also reflect the then-popular tenets of
21 the City Beautiful movement.

22 Architect Willis Polk, one of San
23 Francisco's most important architects of the early
24 20th Century, designed many of PG&E substations
25 and power plants of that era. One of the most

1 important of these substations that I would like
2 to compare with a compressor house is substation
3 C, a/k/a the Jesse Street substation, designed in
4 1905 with additions added in 1907 and 1909.

5 I would like to refer you to Exhibit D.
6 And I apologize for the fact that the photograph
7 at the top is quite small, but I would like to go
8 through some of the common features between these
9 two buildings, and if anyone is familiar with the
10 Jesse Street substation, I think you'll see what I
11 mean: with rectangular massing, very thin applied
12 ornament. The compressor house has these
13 rusticated pilasters on a pretty regular basis,
14 very simple moldings and corbeling along the
15 cornice line.

16 The Jesse Street substation is
17 ornamented to a higher degree because it was a
18 more publicly beautiful building. I think it's
19 interesting that the compressor house, located
20 where it was, even has as much ornament as it
21 does. And if you look at other substations
22 throughout the city, you'll see a very common
23 architectural vocabulary. And it would be
24 interesting to find out actually who designed the
25 compressor house, because I don't think that

1 information has surfaced yet.

2 Q What is the significance of the
3 seniority between the Jesse Street substation and
4 the compressor house?

5 A I think the primary significance behind
6 this is the link between architecture and prestige
7 that many turn-of-the-century, late 19th-Century
8 industrialists saw. These companies were local
9 companies, they were very concerned about their
10 images, the architectural styles they chose for
11 their buildings, no matter how utilitarian,
12 reflected their prestige, their power, and their
13 ability to hire big-name architects to design even
14 the most utilitarian buildings.

15 Q Let's move on to station A.

16 A I disagree with the URS/Dames and Moore
17 report findings. Station A does not, quote,
18 appear to be architecturally significant or
19 significant in the history of building technology,
20 and I've got two separate points there. The first
21 point I will discuss is the architectural
22 significance of station A, and then I'll discuss
23 the integrity question.

24 COMMISSIONER PERNELL: Excuse me, before
25 you get to station A and the compressor house,

1 would you say that historically that would be
2 listed in one or three or one and three?

3 THE WITNESS: California Register
4 criteria one and three.

5 COMMISSIONER PERNELL: One and three.

6 THE WITNESS: Yes.

7 COMMISSIONER PERNELL: Okay, and the
8 same question would be for the station A?

9 THE WITNESS: Correct, yes.

10 COMMISSIONER PERNELL: One and three?

11 THE WITNESS: Yes.

12 COMMISSIONER PERNELL: Thank you.

13 THE WITNESS: First of all, enough of
14 the structure survived to communicate this
15 historic appearance from public ways. I would
16 like to direct you to Exhibit C -- I'm sorry,
17 Exhibit E.

18 Exhibit E shows the north elevation of
19 station A, which dates from the original 1901
20 construction, and it also shows the machine shop,
21 which abuts the station A on the west side.

22 BY MS. MINOR:

23 Q Mr. Ver Planck, a point of
24 clarification.

25 A Mm-hmm.

1 Q What you're calling the machine shop has
2 also been called the office building during these
3 hearings?

4 A Correct. On Sanborn maps, early Sanborn
5 maps it's marked as both or either, so it's not
6 clear. I think its use has changed.

7 Q Furthermore, the 1930 remodeling of the
8 south and part of the west elevations has assumed
9 a level of importance that may even supersede the
10 original 1901 construction, in terms of overall
11 significance.

12 The vocabulary, the architectural
13 vocabulary chosen for the 1930 remodel shares much
14 in common with the compressor house and other PG&E
15 buildings of the same era, with the rusticated
16 pilasters, very simple cornice, and overall
17 rectangular massing.

18 The National Park Service in National
19 Register Bulletin 15 states, "Additions, such as
20 the 1930 addition to station A, constructed during
21 the period of significance, may acquire their own
22 significance through age and associations.
23 URS/Dames and Moore also found that station A's
24 historic integrity had been severely compromised."
25 I also disagree with this finding, based on my

1 understanding of integrity of industrial sites.

2 Integrity is the ability of a property
3 to convey its significance. The evaluation of
4 integrity is quite subjective; however,
5 determining why, where, and when a property is
6 significant and defining the seven aspects of
7 integrity facilitates the determination.

8 As noted by Dr. Groth, the traditional
9 interpretation of integrity is geared toward high-
10 style buildings that are constructed in a
11 particular year, and in many cases do not undergo
12 significant rebuilding or additions, not
13 industrial spaces such as station A.

14 Factories and industrial spaces are
15 indeed messy. They tend to experience generations
16 of accretions. Station A is no exception,
17 although most of its alterations, including the
18 substantial 1930 remodel, took place well within
19 the period of significance.

20 Dames and Moore relied on the demolition
21 of the boiler room in the rear of the building in
22 1983 to support its finding, that the integrity of
23 station A has been compromised. The boiler room
24 and the turbine room, which does survive, were
25 distinct parts of station A. In addition, the

1 removal of the boiler room can only be perceived
2 from the rear of the building, which is generally
3 not publicly accessible. The northwest and south
4 elevations all retain a very high degree of
5 integrity, in relation to all seven variables of
6 integrity: location, design, setting -- although
7 setting, I think it has established, has been
8 compromised overall; materials, workmanship,
9 feeling, and association.

10 Even with the rear half, which is not
11 visible from the street removed, a six-story-tall
12 brick building over 400 feet long, especially a
13 pre-1906 structure, largely pre-1906 structure, is
14 a significant landscape feature. Even with the
15 boiler room gone, I would estimate that upwards of
16 60 percent of the building remains.

17 I know it's been going back and forth
18 about how much of the building is gone. I think
19 if you look at an aerial photograph, and I'd like
20 to refer you to Exhibit I believe it's 46 from
21 yesterday, which shows a plot plan of the PG&E
22 site, and if you look at station A, you'll see
23 where --

24 COMMISSIONER PERNELL: One second.

25 THE WITNESS: Okay.

1 COMMISSIONER PERNELL: Okay.

2 THE WITNESS: If you look at the actual
3 footprint of station A, you'll see the boiler room
4 extent. The top half is kind of reddish-orange,
5 the bottom half is grey. To the left you'll see
6 the 1930 addition on the lower left-hand side of
7 the building. You'll also see the machine shop
8 office to the north of that section.

9 In terms of the overall footprint, it
10 looks to me like a little more than a third of the
11 building is gone, if you accept the fact the
12 machine shop is part of the building.

13 BY MS. MINOR:

14 Q Are you familiar with other buildings in
15 San Francisco and then in California as well
16 that -- where significant portions no longer
17 exist, but the building has been deemed eligible
18 for the California Register or the National
19 Register?

20 A Yes. In San Francisco, there is one
21 city landmark in particular that comes to my mind
22 and that's the El Capitan Theater on Mission
23 Street. I don't remember the exact address, but I
24 believe it's the 1800 block. And essentially what
25 we have here is a combination theater and hotel

1 built in the early 1920s, and the facade of the
2 theater and the hotel survives, but the auditorium
3 is gone. In fact, you can only perceive that if
4 you go through the building to where the
5 auditorium was and it's now a parking lot. But
6 that's not clearly perceived from public ways
7 either.

8 Q Thank you. And your comments about the
9 machine shop?

10 A Okay. The URS/Dames and Moore report
11 does not address the machine shop or office
12 appended to the west wall of station A in
13 sufficient detail. In my opinion, the machine
14 shop is an extraordinary small-scale concrete
15 structure with a highly unusual Renaissance
16 baroque facade made of sheet metal, the cornice
17 and the window hoods.

18 And I'd like to refer you back to
19 Exhibit E again. It's a very unusual building in
20 San Francisco. I find it's also, similar to the
21 points I made before, I think it's very
22 interesting that PG&E would have lavished such
23 attention to detail on such a small-scale
24 utilitarian structure within a larger industrial
25 site such as this.

1 I think more research needs to be done
2 to figure out, to learn more about this particular
3 building: what it was used for and who designed
4 it.

5 COMMISSIONER PERNELL: Is it
6 freestanding?

7 THE WITNESS: According to -- Can I
8 refer to Joe Boss's observations? According to
9 Joe Boss, who was here yesterday, the east wall is
10 attached to the brick of station A, but the other
11 three walls are freestanding concrete. That's my
12 understanding. I've not been inside the building.

13 COMMISSIONER PERNELL: Did you take
14 these pictures?

15 THE WITNESS: I took the exterior
16 photos, yes.

17 COMMISSIONER PERNELL: Okay.

18 BY MS. MINOR:

19 Q Let's move to your recommendations,
20 specifically focusing on your proposal that an
21 industrial historic district be established called
22 the Potrero Point district, and what the
23 boundaries of that district would be.

24 A Okay. It is my opinion that the
25 historic portion of Potrero Point is eligible for

1 listing in the National Register as an historic
2 district. This proposed Pier 70 Potrero Point
3 district possesses a significant concentration,
4 linkage and continuity of sites, buildings, and
5 structures that are united historically by an
6 informal plan of industrial development.

7 The proposed district will be composed
8 of a variety of industrial sources, resources,
9 many of which are individually significant, and
10 all of which share an important common history.
11 The proposed district a definable geographic area,
12 and shares a common period of significance, 1882
13 to 1949.

14 I'd like to refer you to Exhibits F1 and
15 F2 for the potential boundaries of the district.
16 Let's start with F1.

17 Now, the boundaries that I've
18 established here are very general in nature. For
19 an actual historic district, one would actually
20 have to go in here to conduct further research to
21 determine contributors and non-contributors. This
22 is a general starting point.

23 And as other testimony has pointed out,
24 there are large areas that don't have buildings on
25 them, and there are large areas that have -- not

1 large -- there are smaller areas that have non-
2 contributor buildings on them.

3 These boundaries would have to be
4 redrawn to conform to the largely historic
5 sections of the Potrero Point area, but, by and
6 large, these boundaries do hold true.

7 In my opinion, the most important
8 sections of the potential historic district are
9 Pier 70, Union Ironworks, and the northern half
10 marked in type, with the center of that historic
11 district being -- of this section of the historic
12 district being 20th Street, like the machine shops
13 on the south side, the drafting house, and the
14 headquarters, the administration building on the
15 north side of 20th Street.

16 Extending southward, south of buildings
17 113 and 114, there are several other important
18 Union Ironworks buildings that show up better on
19 Exhibit F2, which is an historic aerial photograph
20 of Pier 70, taken about 1945. And many of the
21 buildings on the east side adjacent to the water
22 are gone, but most everything in the center is
23 still there, including the large plate shop, which
24 is the linkage between the Pier 70 Union Ironworks
25 area of the district and the Potrero power plant

1 area to the south.

2 Basically, the only interruption you
3 have between these two sections is one gas tank.
4 And I believe that is tank number four. Aside
5 from that, the buildings of the Union Ironworks
6 Pier 70 section and the Potrero power plant are
7 physically within one area.

8 And proceeding further south, below the
9 Potrero power plant, this district would also
10 encompass the two Western Sugar refinery
11 warehouses. And unfortunately, I've only got one
12 hooked in the boundary; that was a typographical
13 error. There is another warehouse to the left
14 that would also be included.

15 Subject to further evaluation, the
16 proposed district would encompass the Union
17 Ironworks steel buildings at Pier 70, the remnants
18 of Irish Hill, the American Can Company as well,
19 which is the large industrial structure between
20 Illinois and Third Streets, which can also be seen
21 on Exhibit F2 with the monitor roofs between the
22 Dogpatch district marked out in red and the Union
23 Ironworks Pier 70 marked out in red as well.

24 As I said before, the period of
25 significance for the district would be 1882 to

1 1949, with the earlier date based on the
2 construction of the earliest Union Ironworks
3 buildings, and 1949 being the ending date, which
4 corresponds with the beginning of the district's
5 decline and decay following the end of the Second
6 World War.

7 The identified themes to the area's
8 significance include architecture and industry,
9 according to the National Park Service National
10 Register Bulletin 16A, page 40.

11 Q Does that conclude your testimony?

12 A Yes, it does.

13 MS. MINOR: Thank you.

14 THE WITNESS: Thank you.

15 MS. MINOR: Our last witness is Charles
16 Chase.

17 BY MS. MINOR:

18 Q Would you please state your name for the
19 record and indicate if there are any corrections
20 to your testimony.

21 A My name is Charles Chase and I have no
22 corrections to my testimony.

23 Q Would you please summarize your
24 professional qualifications.

25 A Yes, I will. I'm the executive director

1 of San Francisco Architectural Heritage. I have
2 more than 25 years of experience as an architect
3 specializing in historic architecture and have
4 extensive experience in the recording, assessment,
5 and rehabilitation of existing historic building
6 resources.

7 I have worked in the public, private,
8 and nonprofit sectors on a variety of projects
9 requiring compliance with federal and state
10 historic preservation regulations, in California,
11 Florida, Georgia, and South Carolina.

12 I am the former director of Real Estate
13 Services for Historic Savannah Foundation,
14 Savannah, Georgia, and the former preservation
15 officer for the city of Charleston, Charleston,
16 South Carolina. And I hold bachelor's and
17 master's degrees in architecture, with
18 specialization in architectural preservation from
19 the University of Florida.

20 Q Thank you. Would you briefly summarize
21 the role of San Francisco Heritage in San
22 Francisco, and also your participation on the
23 central waterfront cultural resources survey, and
24 your role on the Port of San Francisco Pier 70
25 Citizens Advisory Committee.

1 A Yes. Heritage is a chartered nonprofit
2 corporation established in 1972. Its mission is
3 to develop and maintain public appreciation and
4 understanding of the cultural, aesthetic, and
5 economic value of San Francisco's architecturally
6 and historically significant structures and
7 districts; and two, to be an effective force in
8 motivating public and private action to preserve
9 and protect these resources.

10 In 1999 the San Francisco Planning
11 Department received California State Historic
12 Preservation Grant funding to survey the central
13 waterfront. The central waterfront cultural
14 resource survey which you have talked about or
15 heard testimony on was a part of that activity.

16 In addition to that, the Port of San
17 Francisco Pier 70 Citizens Advisory Committee was
18 established to assist the port in identifying and
19 prioritizing goals and objectives for the
20 improvement of Pier 70, and I sit as a member of
21 that advisory committee. It established historic
22 preservation as a principal goal for Pier 70, in
23 order to encourage the retention of significant
24 resources and to inform and shape future
25 development under the Port's control.

1 Q The testimony has established that the
2 loss of historic resources at Potrero Point would
3 be significant. What mitigations do you propose
4 to mitigate the loss of the cultural resources at
5 the Potrero power plant site?

6 A The testimonies of Mr. Ver Planck and
7 Dr. Groth demonstrate that industrial resources on
8 the Potrero Point site are highly significant.
9 Therefore, their loss demands a higher level of
10 mitigation, and relocation as proposed by the CEC
11 staff as a means to mitigate this loss creates a
12 false sense of history, as these resources would
13 lose integrity of location, setting, and
14 association by being placed in a different
15 context.

16 These facts combined with the
17 questionable feasibility of safely moving these
18 resources without significant damage leads one to
19 examine other more prudent forms of mitigation
20 that would better preserve the overall history of
21 Potrero Point.

22 The most appropriate mitigation measure
23 identified thus far is the rehabilitation of
24 historic resources within the eligible historic
25 district. It is my opinion that the most worthy

1 resource for rehabilitation is the Union Ironworks
2 building, building 113, at Pier 70, which is
3 comparable to station A in scale, materials,
4 construction, and simple detailing.

5 Should station A be demolished, building
6 113 would be the sole surviving large-scale early
7 masonry building remaining within the industrial
8 Potrero Point district. The demolition of station
9 A increases the importance of building 113 as an
10 individual structure; however, the loss of station
11 A removes important adjacencies, spatial
12 relationships, and the physical fabric of the
13 larger industrial district. Therefore, transfer
14 of funds to rehabilitate building 113 would help
15 retain a highly significant resource that shares
16 similar physical characteristics of scale,
17 material, and characteristics, including load-
18 bearing masonry construction.

19 Unlike the proposed relocation of
20 structures suggested by the CEC staff,
21 rehabilitation of building 113 would reinforce a
22 highly significant authentic resource, and extend
23 its useful life in its original location. The CEC
24 staff proposal to relocate historic resources
25 would technically salvage the brick and mortar,

1 but it would create a false and artificial context
2 and delude the integrity of the district by
3 establishing artificial spatial relationships.

4 Q Thank you. There were questions
5 yesterday of the status of the Pier 70 historic
6 district eligibility. Mr. Chase, can you clarify
7 for us where that stands today.

8 A The status of the Pier 70 historic
9 district is one that is in process towards
10 designation. It is known and has been recognized
11 as a -- by the State Historic Preservation Office
12 as determined eligible. It has been formally done
13 so by the SHPO.

14 Q Is it eligibility for the National
15 Register or eligibility for the California
16 Register?

17 A I believe it's eligible for the National
18 Register, and concurrently would be eligible for
19 the California Register under the process, they're
20 similar processes.

21 Q And what is the status of the Dogpatch
22 district?

23 A Currently the Dogpatch survey has been
24 adopted or has been -- yes, it has been adopted by
25 the City and County of San Francisco and historic

1 district regulations, legislation is pending for
2 the establishment of a local historic district.

3 Q And that legislation is pending
4 before --

5 A The board of supervisors of the City and
6 County of San Francisco.

7 Q Do you have any further comments at this
8 point?

9 A I think, based upon the importance and
10 contribution of each of these buildings that have
11 been discussed this morning, and the need to
12 remove station A and the ancillary supporting
13 structures, rehabilitation of building 113
14 contributes to a higher level of retention than
15 the relocation measures recommended by the CEC
16 staff.

17 In the event further study and
18 evaluation determines this recommendation is not
19 feasible, rehabilitation of other historic
20 buildings within the proposed district should be
21 studied.

22 Q Does that conclude your testimony?

23 A Yes, ma'am.

24 MS. MINOR: Thank you.

25 We have concluded our direct testimony,

1 and the witnesses are available for cross-
2 examination.

3 HEARING OFFICER VALKOSKY: Okay. Before
4 we begin, Ms. Minor, you indicated you wanted to
5 identify those five pages of colored photographs,
6 replacement photographs?

7 MS. MINOR: Yes. Shall we make them as
8 a packet a new exhibit?

9 HEARING OFFICER VALKOSKY: Yes. We'll
10 take the five pages of colored photographs that
11 are replacements for the attachments to Mr. Ver
12 Planck's testimony, and we'll identify it as
13 Exhibit 49.

14 MS. MINOR: Is there an Exhibit 48?

15 HEARING OFFICER VALKOSKY: Yes. That
16 was the modifications to staff's testimony that
17 they submitted to the cultural resources
18 testimony.

19 Okay. Before we begin cross, again,
20 just a couple of questions for the panel for
21 clarification.

22 Who would the recognizing body be for
23 the Potrero Point district? In other words, what
24 process would you have to follow to have the
25 district as you described officially acknowledged

1 as a historic district?

2 WITNESS VER PLANCK: Well, you'd have to
3 conduct further study, establish boundaries, and
4 fill out the National Register nominating form.
5 You would then submit that to the SHPO's office in
6 Sacramento. They would review it and make any
7 requested, they would request changes, possibly.
8 Those would then be done. You would resubmit it,
9 but it would be the Historic Resources Commission
10 that meets three times yearly that would make the
11 final determination.

12 HEARING OFFICER VALKOSKY: Okay, and
13 what stage in that process is the existing Potrero
14 Point district? You said there had to be further
15 studies done.

16 THE WITNESS: Correct. Yeah, this is
17 just an identification. There has been no formal
18 work, aside from identifying a potential historic
19 district that encompasses --

20 HEARING OFFICER VALKOSKY: Okay. So
21 this is a very early stage, for lack of a better
22 description.

23 THE WITNESS: Correct.

24 HEARING OFFICER VALKOSKY: Okay.

25 WITNESS CHASE: Excuse me. There is one

1 piece of information that --

2 COMMISSIONER PERNELL: I'm sorry, you
3 need to identify yourself just for the record.

4 THE WITNESS: Okay. I'm Charles Chase.
5 I think there is an additional piece of
6 information that is helpful. There are certain
7 properties within this district that have already
8 been surveyed. Because of the Dogpatch survey,
9 the previous work that has been done on the Pier
10 70 site, that information would not necessarily be
11 duplicated but would be used in the definition of
12 the boundaries that we have discussed this
13 morning.

14 HEARING OFFICER VALKOSKY: Okay. But
15 nevertheless, you would still have to study a
16 bunch of the other elements, and I'm assuming this
17 would take a period of several years? Is that a
18 representative factor?

19 WITNESS VER PLANCK: Well, the advantage
20 we have is that the bulk of the research has been
21 done.

22 HEARING OFFICER VALKOSKY: The bulk has
23 been done.

24 THE WITNESS: The histories of -- The
25 context that I prepared for the Dogpatch historic

1 district nomination, plus the city's central
2 waterfront survey, these context statements would
3 cover virtually everything that would need to be
4 included within a context statement for the
5 potential Potrero Point district.

6 Basically, what one would have to do is
7 establish the boundaries, justify those
8 boundaries, and tinker with the context statement
9 to make it fit specifically this identified
10 potential district.

11 HEARING OFFICER VALKOSKY: Okay, and are
12 there any efforts currently underway which would
13 lead to that result in an identified amount of
14 time?

15 THE WITNESS: No.

16 HEARING OFFICER VALKOSKY: No, okay. Do
17 you -- I understand from your testimony that the
18 City and County consider station A an historical
19 resource. Does your testimony also consider the
20 meter house and the compressor house as
21 significant historical resources?

22 THE WITNESS: Yes.

23 HEARING OFFICER VALKOSKY: Okay.
24 Mr. Chase, when you indicated that, in your
25 opinion, rehabilitation of building 113 would

1 suffice in the event that the station A building
2 were demolished, would it also suffice in the
3 event the meter house and the compressor house
4 were demolished?

5 WITNESS CHASE: Essentially, yes. What
6 we're saying is that comparable resources, rather
7 than seeing buildings relocated or inappropriately
8 placed on sites that might have an adverse or a
9 negative effect on authentic resources in their
10 original location, that the appropriate measure
11 would be to balance the effect by investment in
12 authentic resources.

13 So essentially, the simple answer is
14 yes, but we think that there are comparables that
15 should be looked at: the size and shape, for
16 instance; the kind of intensity of station A, the
17 efforts to seismically reinforce is a simple
18 measure. For station A, those values would be
19 similar to the warehouse, the machine shop,
20 building 113.

21 HEARING OFFICER VALKOSKY: Okay.
22 Hypothetically, were funds made available for the
23 rehabilitation of building 113, would that, in
24 your opinion, reduce any impacts from the removal
25 of station A, the meter house and the compressor

1 house, to below a level of significance?

2 THE WITNESS: There would still be
3 significance of the action, but we believe that
4 those actions that you have heard and have been
5 recommended to you as an option for mitigation, we
6 don't believe that those are appropriate for
7 either the buildings or any potential site within
8 the proposed district that you've heard about
9 today.

10 Therefore, we think that the protection
11 and further retention of authentic historic
12 resources is the appropriate measure.

13 HEARING OFFICER VALKOSKY: When you talk
14 about the rehabilitation of building 113, what is
15 your meaning of the term "rehabilitation"?

16 THE WITNESS: In general, it is meeting
17 the secretary's standards for rehabilitation in
18 terms of retention of the existing historic
19 fabric, it would be the seismic reinforcement of
20 that building to retain or prolong its life. It
21 does not contemplate any adaptive use or new use,
22 because there is none proposed, and, therefore, it
23 would be inappropriate to do that at this time.

24 It is the, I guess the objective view is
25 to retain that building through retention and

1 support of its existing foundations, its existing
2 exterior masonry walls, its window and door
3 openings, its roof framing, and roof covering
4 system to a level that meets current building
5 codes. Also taking into account that this
6 building is eligible for use of the state historic
7 building code, would then utilize that as well as
8 any measure to retain historic resources in the
9 process of meeting current code requirements.

10 HEARING OFFICER VALKOSKY: Do you have
11 an estimated dollar figure attached with the
12 rehabilitation?

13 THE WITNESS: That question has been
14 asked a number of times over the last couple of
15 days, and the answer to that is no. It is
16 something that needs to be studied, it needs to be
17 assessed on a specific building basis.

18 Building 113 has simply, because of its
19 age, its former use and current use, have
20 particular aspects and characteristics that need
21 to be very intensely studied, and the simple
22 answer is no, we have not done that. We believe
23 that that is something for qualified engineers and
24 constructors to do.

25 HEARING OFFICER VALKOSKY: Assuming the

1 funds were defined or determined to be reasonable
2 and were made available, what mechanism would you
3 suggest to make sure that the funds were, in fact,
4 dedicated to the rehabilitation of building 113
5 and not used for other worthwhile purposes?

6 THE WITNESS: I think certainly there
7 are ways to do that. I would assume that the Port
8 of San Francisco as the current property owner for
9 building 113, that based upon the required
10 evaluation, structural assessment and cost
11 estimates, that those funds be dedicated and used
12 for the building.

13 It could very well be done in a manner
14 that requires stipulations to meet the secretary's
15 standards. I believe that that, by contract,
16 could be accomplished.

17 HEARING OFFICER VALKOSKY: Okay. You
18 indicated that the Port is the owner. Has the
19 Port indicated to you an interest in the rehab of
20 building 113?

21 THE WITNESS: It is an unreinforced
22 masonry building, and, as a member of the Citizens
23 Advisory Committee for Pier 70, the Port has
24 indicated their concern and we have reflected that
25 concern back on them, that this building is

1 probably the most significant resource in their
2 holdings at Pier 70 and needs to be preserved.
3 And they have recognized that and intend to do
4 that.

5 Again, the funds are not currently
6 available, and there is no planned future
7 allocation for that building at this time.

8 HEARING OFFICER VALKOSKY: Last question
9 on the funds: Do you have any idea how long it
10 would take to get an estimate as to how much funds
11 were needed, what amount of funds were needed?

12 THE WITNESS: I'm going to evade your
13 question, I think. The notion is that the Port of
14 San Francisco would probably be better served
15 because they have a system in place for doing that
16 within their hierarchy of employees and staffing,
17 but my general professional opinion is that you
18 could, within three to six months, have a full
19 estimate that would tell you a fairly accurate
20 cost for the seismic stabilization and maintenance
21 of the existing building shell. However, there
22 are complications because the Port owns the
23 property and I am not a Port employee or privy to
24 their inner workings.

25 COMMISSIONER PERNELL: Just a followup

1 real quick.

2 HEARING OFFICER VALKOSKY: Mm-hmm.

3 COMMISSIONER PERNELL: Is the Port of
4 San Francisco a public entity?

5 THE WITNESS: Yes, it is.

6 COMMISSIONER PERNELL: So are the
7 members elected or appointed?

8 MS. MINOR: The Port of San Francisco is
9 actually a department of the City and County of
10 San Francisco. The governing body is a commission
11 that's appointed by the mayor of San Francisco, a
12 department head who is also a member of the
13 executive branch, and selected by the mayor of San
14 Francisco.

15 COMMISSIONER PERNELL: Thank you.

16 COMMISSIONER KEESE: So could the City
17 exert its influence in trying to get an estimate?

18 MS. MINOR: Oh, absolutely.

19 COMMISSIONER KEESE: Would you?

20 MS. MINOR: Yes.

21 (Laughter.)

22 COMMISSIONER PERNELL: That's the
23 shortest answer I've heard.

24 (Laughter.)

25 COMMISSIONER KEESE: How about by the

1 time we continue this topic to a future hearing?
2 And I, of course, don't know when that will be,
3 but it will probably be at least a month.

4 MS. MINOR: Well, there is a
5 representative from the Port's planning department
6 who is here, and he is obviously not a witness so
7 we're not going to call on him. But I would think
8 that we may not be able to get a firm estimate by
9 the rescheduled date, but certainly we will have
10 something that is a workable number.

11 COMMISSIONER KEESE: Okay, thank you.

12 HEARING OFFICER VALKOSKY: Shifting
13 gears, I've heard a range, at least to what a
14 layperson like me finds is a little confusing
15 about historic themes and locational significance.
16 And on the one hand, I hear from Mr. Corbett that
17 relocation of the building to a site that has
18 previously been used for gas production is
19 necessary in order to preserve its significance.

20 Staff's witnesses seemed to back off on
21 that a little bit, saying as long as we preserve
22 the orientation of the building on a fairly
23 similar site, although not one exactly used for
24 the same purposes, is acceptable in the case of
25 relocation. And now I hear from you gentlemen,

1 especially Dr. Groth, that what we really should
2 look at is the broader historical trends, the
3 linkages on a more societal level rather than just
4 a particular site-specific level.

5 I wonder if you could explain that. Am
6 I misinterpreting this, or which is the
7 professionally accepted viewpoint? Which theme
8 should we be looking at? The specific use of a
9 site or the broader integration, the societal
10 themes, I'll call them?

11 WITNESS GROTH: My point would be that
12 it's better to start with the larger, broader
13 view, rather than a very narrow view. Tell the
14 best story possible on Potrero Point, rather than
15 coal gasification is the only story on Potrero
16 Point. That's the point I was trying to make.

17 HEARING OFFICER VALKOSKY: And is that
18 generally accepted in the profession?

19 THE WITNESS: It's been accepted by
20 historians, who are trying to tell the story of
21 American history.

22 HEARING OFFICER VALKOSKY: Okay,
23 architectural historians or just historians in
24 general?

25 THE WITNESS: That would not be the most

1 popular view in preservation groups.

2 HEARING OFFICER VALKOSKY: So it's fair
3 to say there is some dispute.

4 THE WITNESS: There is dispute. These
5 are things on which reasonable minds may differ,
6 as you've found.

7 HEARING OFFICER VALKOSKY: Okay.

8 And, Mr. Ver Planck, I think this was in
9 your testimony, you indicated that in the proposed
10 Potrero power plant district there were a lot of
11 contributors existing. Now, I believe I heard
12 Ms. Scott from staff yesterday say that anytime
13 the percentage of non-contributors in a district
14 approaches 25 percent, you're getting less and
15 less likely to consider that are as a district.

16 Do you agree with that?

17 WITNESS VER PLANCK: Yes, and that's why
18 the boundaries would have to be drawn, so that
19 they encompassed as many historic contributing
20 resources as possible, and omitting the other non-
21 contributing resources.

22 HEARING OFFICER VALKOSKY: Okay. So
23 that is something that, in the event you go ahead
24 with the Potrero Point district, you think that
25 you could draw the boundaries in such a way as to

1 avoid that?

2 THE WITNESS: Yes.

3 HEARING OFFICER VALKOSKY: Thanks for
4 that clarification.

5 COMMISSIONER KEESE: Mr. Chase, I wasn't
6 clear on your response to an earlier question,
7 mitigating the removal of station A by
8 rehabilitating building 113. Would that reduce
9 the impact of moving station A to something less
10 than significant?

11 WITNESS CHASE: I think the direct
12 answer to that is no, in the sense that the loss
13 of those buildings, the removal is significant to
14 the understanding of not only the site but the
15 larger district.

16 What we are indicating is that the
17 options or alternatives before you that have been
18 discussed are not appropriate either, that they
19 cloud and they, in fact, detract from the original
20 and authentic character of this district by
21 relocation of these buildings to sites where they
22 never were, and that they may cloud the
23 interpretation of other historic, individually as
24 well as collective -- the district description by
25 or in their new location.

1 COMMISSIONER KEESE: I understand that
2 from your testimony. If you take the district
3 perspective that Dr. Groth just espoused, if
4 you're enriching the district by rehabilitating
5 building 113 at the cost of removing station A,
6 from a district perspective, recognizing there is
7 no district yet --

8 THE WITNESS: Right.

9 COMMISSIONER KEESE: -- but there is an
10 overall perspective and story to be told there --

11 THE WITNESS: I think that there --

12 COMMISSIONER KEESE: -- is your panel's
13 testimony. So overall, are you reducing the
14 impact to something less than significant?

15 THE WITNESS: If I might, there is
16 something of the inevitable in our discussion
17 today, and the discussion is that if the power
18 plant moves forward, these resources will be lost.
19 And, therefore, that detracts and takes away from
20 the larger district.

21 And we believe that compensation for
22 that is the protection and further enhancement of
23 existing authentic resources.

24 COMMISSIONER KEESE: Okay. I'll move
25 on.

1 Mr. Ver Planck, regarding station A, you
2 testified that it is historically significant, it
3 has integrity. And I believe in your testimony
4 you remarked that most evaluations of integrity
5 are geared toward high-style buildings that are
6 constructed in a particular year, etc., etc.

7 The staff's witness yesterday was very
8 clear that the part of station A that's been
9 removed indeed had many very distinct
10 characteristics that made station A what it was:
11 smokestacks, chimneys, the like. The removal of
12 the boiler room removed those features, and it was
13 his testimony, therefore, that the building lacks
14 integrity from that standpoint.

15 Yet you're saying that it does have
16 integrity. Even with the removal of those
17 features, you still believe that it retains
18 integrity?

19 THE WITNESS: Well, I think its primary
20 role is creating a backdrop in some ways,
21 especially from public streets for the compressor
22 house and the meter house.

23 Until I actually visited the site and
24 saw the rear of the building, I didn't know that
25 part of the building was gone. That's not really

1 apparent, unless you go behind the building. From
2 the street, from most of the perspectives that you
3 have from this complex, it reads as being part of
4 the larger industrial complex that's kind of -- it
5 looks like an appendage, if one doesn't know how
6 these buildings work, an appendage to the Pier 70
7 site just to the north.

8 In terms of the boiler house being
9 removed, in terms of the functioning of the plant,
10 yes, that is a significant removal, in terms of
11 the functioning of the plant. But if you're
12 looking at it architecturally, if you're looking
13 at does what is left of the building tell a story
14 about the industrialization of Potrero Point, I
15 believe that it does.

16 COMMISSIONER KEESE: One last question:
17 I can't seem to come to grips with or reconcile
18 this notion that the removal -- Well, let me ask
19 it a different way. And this is to the panel:
20 How do you balance the need to preserve
21 contemporary or the need to preserve historic
22 sites or historic resources with what may be a
23 very compelling contemporary need?

24 Clearly the removal of a resource -- Is
25 it always a significant impact? Is it the removal

1 of any or the demolition or the degradation of
2 any historic site? Is it always significant when
3 balanced with contemporary needs?

4 WITNESS CHASE: I think you've heard
5 testimony over the last two days about the
6 significance of individual structures and their
7 contribution to larger districts, whether it be
8 Pier 70, Dogpatch, or the larger district that we
9 have discussed this morning.

10 In looking at the individual resources
11 that may be removed as the part of an action for
12 contemporary use, and my organization sees this
13 every day and we speak in the public forum about
14 that on a regular basis, that there is and needs
15 to be a balance between what we preserve, how we
16 preserve it, and how we carry on our contemporary
17 lives. We live, we eat, we breathe, we give birth
18 and die in cities, and, therefore, they have to
19 change along with us.

20 Our point is, is that in looking at
21 resources, we have to compare them to the larger
22 context. We need to identify those resources as
23 being valuable to our understanding of our past,
24 and can they fit within our contemporary lives.
25 If, through the larger discussion, they do not fit

1 within our immediate needs, we have to do
2 something that either does one of several things.
3 Either it memorializes it, as you've heard about
4 Historic American Building Survey, Historic
5 Engineering Record, documentation, a kiosk, or
6 some kind of recordation.

7 But that oftentimes is the last-ditch
8 effort. We always try and move to a middle ground
9 where resources are adaptively used, protected,
10 and become a part of our continuing contemporary
11 lives. If they can't be, then we have to find
12 some way to mitigate that.

13 And I believe that that's pretty much
14 the tenet of all of our regulations within the
15 historic preservation arena, is that we find that
16 there is an effect on a historic resource, and it
17 is then appropriate to determine those mitigation
18 measures that determine whether the resource
19 requires retention or can be allowed to be
20 removed, and what steps do we take to memorialize
21 that.

22 COMMISSIONER KEESE: Thank you.

23 WITNESS VER PLANCK: Also, in answer to
24 your question --

25 COMMISSIONER PERNELL: Because we have a

1 different speaker, you need to identify yourself
2 for the record, please.

3 THE WITNESS: Oh, okay, sorry. Chris
4 Ver Planck. I just wanted to add briefly that I
5 think that in many cases the need for a new use is
6 very compelling, perhaps more compelling than in
7 this particular situation. I don't think that it
8 can really be overemphasized what an important
9 district this is. As Dr. Groth stated in his
10 testimony, I think that California's industrial
11 heritage is a really understudied and
12 underappreciated legacy.

13 It's funny, I'm a third-generation
14 Californian. When I speak to my friends back
15 east, you know, you have these stereotypes of
16 movie-making and orange-picking or whatever. My
17 grandparents came from Oklahoma to work in the
18 shipyards in Long Beach, and it's funny how when I
19 tell people that, they don't really -- they say
20 oh, there's industry in California?

21 This is where it all began. Potrero
22 Point is where it all started. This was the, as I
23 said in my written testimony, this was the
24 Manchester, the Liverpool, the Sheffield of the
25 west. This is where it all was. And there is

1 some of it left, and I think whatever is left is
2 very compelling.

3 HEARING OFFICER VALKOSKY: In assessing
4 the value of these resources, is public
5 accessibility a legitimate factor to consider?

6 WITNESS VER PLANCK: You mean in terms
7 of --

8 HEARING OFFICER VALKOSKY: By that I
9 mean, and I'm trying to explore this with what's
10 been described yesterday. I mean, you can have a
11 historic resource such as Fort Point, which people
12 can walk in and out of, touch, feel, and you can
13 have a historic resource such as the meter and
14 compressor houses would be, and they're preserved
15 on site, which is, except for some distant
16 viewing, essentially inaccessible to the public
17 because it's on a heavy industrial.

18 So what I'm wondering is -- And
19 Mr. Smith asked what kind of factors do we
20 consider. What I'm wondering is, is this a
21 legitimate factor in the profession that you would
22 consider in assessing the value of the resources,
23 and determining whether or not it should be
24 retained or mitigated or whatever.

25 WITNESS GROTH: Well, I might answer

1 that. I think almost any -- If building 113, the
2 machine shop, is stabilized, it's going to have a
3 fairly large use inside or several uses. It's
4 very likely to have, in its adaptive reuse,
5 whatever that is going to be, a lobby, a public
6 viewing space. And I'm sure if it's reused,
7 according to the secretary's guidelines, which it
8 will have to be, they will preserve the sense of
9 this gigantic crane bay, which is -- How long is
10 that building?

11 WITNESS VER PLANCK: Six hundred feet?

12 WITNESS CHASE: Four hundred, five
13 hundred feet?

14 WITNESS GROTH: Four- or five hundred
15 feet. There's a crane bay several stories tall
16 that runs the whole length of the building. That
17 space will have to be -- The sense of that space
18 somehow -- There are going to be smaller things
19 inside it, but the sense of that big space is
20 going to be visible. And I think people will have
21 a fairly good access, not just to see the outside,
22 but to go inside to some kind of lobby or whatever
23 and get a sense of a truly great industrial
24 building.

25 HEARING OFFICER VALKOSKY: Right. So is

1 what you're saying that that building, whatever
2 use, would be something that the average member of
3 the public could walk into or touch, lean against,
4 as opposed to buildings on the industrial site
5 which the average member of the public could at
6 best view through a fence from whatever distance?

7 THE WITNESS: It's much more likely to
8 be viewed by the public.

9 HEARING OFFICER VALKOSKY: Okay. And in
10 your opinion, is that a legitimate factor to
11 consider when evaluating the value of the
12 resources?

13 THE WITNESS: Absolutely.

14 HEARING OFFICER VALKOSKY: Okay, thank
15 you.

16 MS. MINOR: Mr. Chase, did you have some
17 comments as well?

18 WITNESS CHASE: I think in terms of
19 looking at the buildings on the power plant site,
20 if, for instance, they were retained in their
21 current location and not accessible to the public,
22 they do provide public benefit. I want to
23 emphasize the point that it is not always
24 accessibility to the interior of the buildings
25 that provide -- that historic resources provide to

1 your understanding of the built-in environment.

2 Because they fill and create spatial
3 relationships within this area and of similar
4 building type, the texture or the grit of this
5 district will be continued, as those buildings
6 continue to survive. And they do inform the
7 public by their construction, by their size, their
8 shape, their location and frontage to apparent
9 former public rights-of-way.

10 MS. MINOR: Okay. I think Dr. Groth had
11 one more quick comment.

12 WITNESS GROTH: I should add that the
13 machine shop was the largest human-occupied
14 building on Potrero Point. Over 800 people at
15 peak periods worked in the machine shop.

16 HEARING OFFICER VALKOSKY: This is the
17 building 113?

18 THE WITNESS: Building 113, yeah.

19 HEARING OFFICER VALKOSKY: Right.

20 THE WITNESS: Among the things they
21 built were the engines for ships as large as your
22 stage, and three times taller. The last large
23 things they made in the machine shops were the
24 plates and the fittings for the BART tubes. Very
25 important things were made, pieces for very

1 important things were made by large numbers of
2 people in building 113.

3 And I think the displays of historical
4 photographs -- that's either on the exterior and
5 interior -- will be very exciting, because people
6 will see, this isn't just a shed where some
7 machines were, this is a place where lots of
8 people and many generations worked, and they made
9 very important things for the history of the
10 United States.

11 HEARING OFFICER VALKOSKY: Thank you.

12 COMMISSIONER PERNELL: I just have a
13 couple of followup questions. I think one of the
14 benefits to this model that we're doing now is all
15 but one question got answered.

16 (Laughter.)

17 COMMISSIONER PERNELL: Just a couple of
18 followups. Mr. Chase, you sit on that advisory
19 committee that you talked about earlier, and could
20 you elaborate a little bit more about what I'm
21 assuming the resolution that's going to the board
22 of supervisors for the historical preservation of
23 Potrero Point?

24 WITNESS CHASE: I can clarify something
25 for you. There is currently nothing going before

1 the board of supervisors on the Potrero Point
2 district. As we described earlier, the
3 information is being garnered from other surveys
4 and other activities. What I did say was that the
5 Dogpatch historic district legislation, to create
6 a historic district for that portion of the area
7 that we've talked about, is pending.

8 COMMISSIONER PERNELL: Okay. So I
9 thought I would go to your Exhibit F2, which --
10 well, it just has the Dogpatch on it. Right,
11 okay.

12 If I was to go to that, which kind of
13 outlines, and I know this is a general outline of
14 the Dogpatch community, but there are some
15 other -- there is this other, Union Ironworks Pier
16 70 there, so the resolution or legislation that's
17 going through the board of supervisors doesn't
18 include the Union Ironworks Pier 70 portion?

19 THE WITNESS: No, it doesn't. In terms
20 of the residential industrial area, and the author
21 of that is sitting next to me, Mr. Ver Planck. He
22 may be able to describe it better to you.

23 COMMISSIONER PERNELL: Okay.

24 Mr. Ver Planck, why didn't you include
25 the Pier 70 area that you were kind of generally

1 outlining as what would be a historical industrial
2 district?

3 WITNESS VER PLANCK: Well, I went back
4 and forth on that question when I first started
5 these efforts about three and a half, four years
6 ago. And the reason why I decided to exclude the
7 industrial sites was that the predominant
8 character of Dogpatch is residential. Although
9 there are industrial sites within the district, I
10 tried to exclude as much of that as possible.

11 Because the National Register theme that
12 I identified was residential, and in particular,
13 industrial workers' housing. So I always
14 envisioned Pier 70 Union Ironworks being nominated
15 later, as, although there's no formal status to
16 this term, a sister district that is linked to
17 Dogpatch and vice versa.

18 But there would be two associated
19 districts, one industrial, one residential but
20 with the same or very similar context, contextual
21 history behind them.

22 COMMISSIONER PERNELL: In order to do
23 the industrial proposed district, would you still
24 have to go to the board of supervisors, or would
25 that be the Commission Port of San Francisco?

1 THE WITNESS: If it's a city, if it's to
2 be a city landmark district, it would go through
3 the same process that the Dogpatch district is
4 going through; i.e., be sponsored by a
5 supervisor -- in this case, supervisor Maxwell --
6 and then go through the whole process of board of
7 supervisors, mayor.

8 COMMISSIONER PERNELL: Okay. And then
9 my last followup is, and this is a followup to
10 Mr. Valkosky's question in terms of public access,
11 and I was sitting here thinking about what is the
12 benefit to San Francisco, what is the best benefit
13 to San Francisco in this regard, in the topic in
14 which we are talking about. And we have, in going
15 down, taking a look individually at the site and
16 the buildings, and if I could refer you to what is
17 Exhibit -- Okay, this is from the AFC, but this is
18 the color map?

19 THE WITNESS: Yeah, figure 8.3 would
20 deal with that yesterday by Mr. Carroll.

21 COMMISSIONER PERNELL: Okay. As I
22 understand, as we look at Humboldt Street that
23 runs right down the side of the meter house, and
24 then you have the compressor house and then you
25 have station A, there is a fence there. This is

1 private property, so there is a fence there, and I
2 would assume that whether this project is
3 successful or not, there would still be a fence
4 there because it's private property.

5 So public access can't really get to
6 these buildings, whether those buildings were
7 rehabbed or not or moved around, it's still
8 private property. So would the benefit,
9 historical benefit to San Franciscans and the
10 general public, visitors and what have you, be
11 from it looks like one square block away, looking
12 over. So theoretically, if they decided to redo
13 the roof and nothing else, it would just look like
14 a rehabbed building.

15 So that is a question not for you to
16 answer, but certainly one that I think we all
17 should think about is what is the best benefit to
18 San Francisco on this question.

19 Secondly, Mr. Chase, is it -- again,
20 this is private property. Can your advisory
21 committee, or can the City of San Francisco
22 demand, and I know that there is an ordinance that
23 says things have to be earthquake-proof --
24 Actually, it's a statute, but can they demand --
25 If nothing happens to this site, can the City of

1 San Francisco or your advisory committee demand
2 rehab of these buildings, other than the
3 earthquake-proof for safety reasons?

4 WITNESS CHASE: The Citizens Advisory
5 Committee does not have any legal authority to
6 demand. We certainly can suggest and urge. I
7 think it's probably best put to the City in the
8 way that all buildings must either be protect --
9 you know, protect public health and safety. The
10 buildings could not fall into ruin and create an
11 environmental -- whether it be vermin or some
12 threat to the public.

13 COMMISSIONER PERNELL: Right, to the
14 public. But that is the statute that covers
15 retrofitting for earthquakes, I would assume.

16 MS. MINOR: Commissioner Pernell, there
17 was testimony yesterday that the City has granted
18 a waiver of the Uniform Masonry ordinance through,
19 I believe it was -- the testimony was January 1st,
20 2006.

21 COMMISSIONER PERNELL: Right.

22 MS. MINOR: And so the question you're
23 posing is if this project has not moved forward by
24 the expiration of that waiver, what would be the
25 status of these unreinforced buildings. And I'm

1 not an expert on that and I can't answer legally
2 what the requirements would be under the city
3 ordinance. But the City would have to issue a
4 demolition permit, if that is how Mirant would
5 choose to proceed with these resources.

6 And obviously, based on the testimony
7 we've submitted, there would be significant
8 questions raised as to whether the City would
9 issue such a permit to demolish historic
10 resources.

11 COMMISSIONER PERNELL: Right, but I
12 think my point is, if -- Let's say they put some
13 reinforced steel up to make it earthquake-proof.
14 Is there any other ordinance or any other leverage
15 that the City or the committee, the advisory
16 committee has to make them rehab these buildings,
17 to your knowledge? I mean, if you don't know, you
18 don't know.

19 MS. MINOR: I don't know.

20 COMMISSIONER PERNELL: Okay. So it goes
21 back to my point on what is the best, in this
22 situation, benefit to San Franciscans. And that
23 is not a question for anyone to answer, but I
24 think that's something that we all need to be
25 thinking about.

1 HEARING OFFICER VALKOSKY: Okay. Before
2 we pick up with the cross-examination, we'll take
3 a ten-minute recess.

4 (Brief recess.)

5 COMMISSIONER PERNELL: Mr. Valkosky.

6 HEARING OFFICER VALKOSKY: Thank you,
7 Commissioner Pernell. We'll begin the cross-
8 examination of the City and County's witnesses.

9 Mr. Carroll.

10 MR. CARROLL: Thank you.

11 Good morning, gentlemen.

12 CROSS-EXAMINATION

13 BY MR. CARROLL:

14 Q Mr. Ver Planck, I have a couple of
15 questions for you, to start out with. And you, in
16 both your written and your oral testimony today,
17 you expressed the opinion that there is this
18 broader district that we've been talking about
19 which encompasses Pier 70 district, the American
20 Can Company, the power plant, the sugar
21 refineries, and also, the remnants of Irish Hill.

22 A Right.

23 Q And we didn't talk very much about Irish
24 Hill, but I was wondering if you could explain a
25 little bit the basis upon which you would

1 potentially include Irish Hill within that broader
2 district.

3 A Sure. Actually, maybe we should refer
4 to an exhibit so you can see what's left of it.
5 Actually, it's probably best seen on -- Which
6 exhibit is this one? URS figure 8.3, it's 1(B)?
7 That is a reproduction of an AFC page, so it's
8 from Exhibit One.

9 Q Okay. You can see Irish Hill on the
10 left-hand side about midway. There is a little
11 chunk of serpentine rock with some eucalyptus
12 behind it. Irish Hill was originally a much more
13 significant landscape feature, probably about 300,
14 250-300 feet in height that was gradually eaten
15 away over time for the expansion of the industrial
16 plant of both Union Ironworks, Bethlehem Steel,
17 and PG&E.

18 Basically, that's all that's left is
19 that little hillock that you see there. The
20 justification for including it within a potential
21 historic district is based on a growing body of
22 knowledge and expertise dealing with what are
23 called cultural landscapes.

24 And, although this is a natural feature
25 insofar as it actually has some rock involved, its

1 current appearance is the result of man's
2 activities; i.e., you know, several themes that
3 play very prominent points in the development of
4 Potrero Point -- blasting, filling, creation of
5 industrial sites -- in addition to the fact that
6 Irish Hill, on the top of it there's -- I don't
7 think it's ever been archaeologically
8 investigated, but there are shards, bits of
9 building materials, metal, what not, all around on
10 top of this hill.

11 More research would have to be done to
12 evaluate its significance, but at this stage I
13 believe its inclusion within the boundaries of the
14 potential district is justified.

15 Q So is that based primarily on geographic
16 proximity or former uses of Irish Hill?

17 A Both. I mean, it could -- the boundary
18 could be drawn to include -- it's also adjacent to
19 some of the most significant buildings on the
20 Union Ironworks site.

21 Q Okay. And I guess where I'm headed with
22 these questions relates to a question that was
23 touched upon earlier. I guess what I'm -- when I
24 read your prepared testimony it talks about it,
25 and perhaps it was in Dr. Groth's testimony as

1 well, about the connection between the workers and
2 the industry.

3 I guess I'm having a hard time
4 understanding why one would include Irish Hill in
5 this broader district but not Dogpatch.

6 A It's a good point. Irish Hill was
7 always an anomaly within the Potrero Point
8 district. It was a pre-existing use. It was
9 housing. It was basically the most inaccessible
10 and the most difficult area to blast, so it was
11 the last to succumb to industrial expansion in
12 1917 when both these companies took it out.

13 And I think that in many ways its
14 significance may relate more toward industrial
15 expansion than actual housing, because the powers
16 of these industrialists were brought to bear on
17 the Hill.

18 It was actually a big -- It was a big
19 deal when this happened. There was a lot of
20 resistance by the people that lived there to
21 leaving their homes, but in 1917 there was a war
22 going on, they had to expand the plant to build
23 more ships. They were able to get the government
24 to evict the residents of Irish Hill, and then
25 they started blasting it away. So I think it ties

1 in more to industrial.

2 Q I read your survey. It looks like it
3 was a lot of work. You spend a great deal of time
4 in this document talking about the industries on
5 Potrero Point, and I don't know if I've got the
6 terminology right, but I think it's what's been
7 referred to as the context statement, the
8 connections between the residential district and
9 Dogpatch and the industries on Potrero Point.

10 Yet I didn't see in this document the
11 notion of the broader district, and the idea that
12 appears in your prepared testimony today about
13 this broader district on Potrero Point. Did I
14 miss that, or --

15 A That's absolutely correct. I was
16 emphasizing -- My survey was of Dogpatch in
17 particular. But in order to understand the
18 residential districts adjacent to the industry,
19 one had to explore the industrial history. The
20 reason for this housing existing was proximity to
21 jobs.

22 But according to National Register
23 practices, basically you've got to establish a
24 coherent theme. In this case it was industrial
25 workers' housing. I suppose there are districts

1 that incorporate both industrial and residential,
2 but typically you need to have a very coherent-
3 type theme. And that's why I discussed the
4 background, the industrial background of Potrero
5 Point, but only examined in detail the residential
6 area.

7 Q And I can't recall whether you mentioned
8 it in your qualifications or not, but you are also
9 on the advisory committee for the Central
10 Waterfront Cultural Resource District Survey?

11 A That's correct.

12 Q And I assume that you are generally
13 familiar with the contents of this document?

14 A Yes.

15 Q Okay, and --

16 HEARING OFFICER VALKOSKY: Excuse me,
17 Mr. Carroll, "this document," is the Central --

18 MR. CARROLL: Yes, I'm sorry. It's the
19 Central Waterfront Cultural Resources Survey,
20 Summary Report and Draft Context Statement,
21 October 2000 through October 2001, prepared by the
22 San Francisco planning department.

23 HEARING OFFICER VALKOSKY: Thank you.

24 BY MR. CARROLL:

25 A And, just to be clear, the Potrero power

1 plant site is within the boundaries of the area
2 surveyed in the Central Waterfront Survey,
3 correct?

4 A Yes.

5 Q Okay. And you're aware that the power
6 plant buildings, including the station A complex,
7 were included in Appendix D?

8 A Yes.

9 Q Okay. On page 23 of this document, if I
10 could ask you to turn there.

11 A This is the --

12 Q I'm sorry, no, 23 of the text at the
13 front.

14 A Okay.

15 Q There begins a discussion titled Central
16 Waterfront's Potential Historic Districts, and it
17 identifies four of them, the first being Pier 70,
18 the second being Dogpatch, the third being bridges
19 and tunnels, and the fourth being industrial-type
20 buildings.

21 And I guess my question would be the
22 same as I asked you with respect to Dogpatch. Why
23 is it that we don't see here, apparently it didn't
24 dawn on anyone that there might be the broader
25 Potrero Point district that we've been discussing

1 over the last couple of days?

2 A I think that the Potrero power plant
3 buildings were considered to fall under the last
4 category, industrial-type buildings. And it's
5 been a while since I've reviewed this document,
6 but let me just check.

7 MS. MINOR: If you need to review, take
8 your time and do so.

9 MR. CARROLL: Absolutely.

10 THE WITNESS: Okay.

11 (Brief recess.)

12 THE WITNESS: Now, my understanding in
13 regard to the Potrero power plant site was that
14 since the work had already been done by Ward Hill,
15 and I know this is a matter of discussion in the
16 Survey Advisory Task Force meetings, that they
17 were just incorporated by reference.

18 BY MR. CARROLL:

19 Q Okay. And that I understand. You know,
20 it's clear to me, which makes perfect sense, that
21 since Ward Hill and others had surveyed the
22 station A properties, that wasn't redone and he
23 accepted his work and appended it. What I'm
24 questioning, though, is that recognizing that it
25 was obviously considered and was part of the

1 survey, and by it I mean the station A complex,
2 what I guess I don't understand is why, then, in
3 the text when there is a discussion of the
4 potential districts that might exist in this area,
5 there is no mention at all of this broader Potrero
6 Point district which now seems to be a matter so
7 obvious to everyone that it goes without saying
8 and is a district of national importance.

9 A Yeah. I just want to consult the map in
10 Appendix C that's referred to for Pier 70.

11 Okay. I'm looking at the map two,
12 Appendix C. It's a little hard to find, there is
13 no page number, but if you look in the back there
14 is a series of appendices. This is the map.
15 Actually, I think it may be just before --

16 Q This is Ward Hill's work. Is it before
17 or after Ward Hill's work?

18 A I believe it is before.

19 Q Okay.

20 A Because I think that's --

21 Q Here, I've got it now.

22 A You've got it, okay. Now, the Central
23 Waterfront survey area, let's see, they do call
24 out the PG&E area and Pier 70 -- I'm afraid I
25 can't answer that.

1 MR. CARROLL: Okay.

2 BY MR. CARROLL:

3 Q Mr. Chase, you were also on the Central
4 Waterfront Cultural Resources Survey District
5 Advisory Committee?

6 A Yes, sir.

7 Q Do you have any explanation as to why
8 the identification of potential districts would
9 not have included this broader district?

10 A The process of accumulation of the data,
11 I think some background is in order to talk about
12 the survey process. The document that you have
13 before you is part of a collection of information
14 as well as what you have referenced in terms of
15 the power plant site. That information was
16 collected as a part of a state-sponsored grant for
17 the City and County of San Francisco to develop an
18 understanding of the resources in this area.

19 The background is that we knew, because
20 of the kind of potential development that was
21 happening, has happened over the last several
22 years, that this area would be an area that
23 dramatic change would take place, not only in the
24 Dogpatch area but with the potential of
25 development on the Pier 70 site.

1 So we, as part of the advisory
2 committee, took the task of trying to collect this
3 data, one, for the survey of potential districts
4 looking at the work that was started by the
5 organization that I represent -- San Francisco
6 Architectural Heritage -- with the assistance of
7 Christopher Ver Planck, both as an employee of the
8 organization as well as a consultant through Page
9 and Turnbull, and developed specifically that
10 information.

11 We incorporated that into the larger
12 work of the City and County of San Francisco and
13 developed a document that referenced the work, the
14 past and current work. The development of the
15 themes were relegated to the ongoing work of those
16 activities.

17 We have since then taken into account
18 all of the work that is presented in this
19 document, and that's where you have heard
20 testimony of Dr. Groth and Mr. Ver Planck that a
21 larger district should be considered. And, as
22 we've referenced, this is ongoing.

23 Q Okay. Thank you for that explanation,
24 but at the time this was finalized, and this was
25 September or October. I guess the date on the

1 front is October but the date on the inside is
2 September of last year when you were analyzing
3 potential historic districts within the Central
4 Waterfront. At that time you didn't see the
5 broader Potrero Point historic district as a
6 potential district?

7 A At the time, the larger -- Again,
8 because of what Mr. Ver Planck had indicated about
9 themes, we knew that thematically the Dogpatch
10 survey was a piece of this that could be sent
11 forward and identified by the City and County as a
12 district.

13 So, to answer your question, a larger
14 district was not considered to be the first
15 priority of our activities.

16 Q Was it on the list of priorities at all?

17 A No. Again, as I indicated, with the
18 information provided by Dr. Groth, the larger
19 district came to light after this document was
20 published.

21 Q Thanks. You mentioned earlier that you
22 are also a member of the Pier 70 Citizens Advisory
23 Council. Are you familiar in that capacity with
24 the proposal submitted last year to the Port of
25 San Francisco by the San Francisco Arts Future

1 Consortium, which was to develop an arts complex
2 at Pier 70 including, amongst other things, full
3 rehabilitation of building 113?

4 A I am aware that that proposal was
5 tendered. The details of that, none of the
6 members of the Citizens Advisory Committee were
7 made privy to the particulars of that effort. We
8 knew that the offering by the Port of San
9 Francisco for development of properties on the
10 western edge of Pier 70 was offered and was a part
11 of that in developing the goals for historic
12 preservation for that offering.

13 The alternative proposal utilizing
14 building 113 came very late in the process and was
15 not -- the details of that were not revealed to
16 the advisory committee.

17 Q So the advisory committee did not
18 participate in the period of exclusive
19 negotiations that weren't entered into between the
20 Port and the Arts Consortium?

21 A That's correct. We were given status
22 reports, but we were not privy to any of the
23 specifics for those activities.

24 Q In any of your status reports, were the
25 potential costs of the rehabilitation of building

1 113 ever discussed?

2 A Not that I can remember.

3 Q If I told you that in a June 5th staff
4 report from the Port staff to the Port Commission
5 that the estimated costs for that was \$50 to \$55
6 million, would you have any reason to doubt the
7 veracity of that?

8 A I'm sorry, I can't really speak to that.
9 If that is their report, if it was based on
10 evaluations, I might take that. But I have no
11 knowledge of it, nor the specifics of what that
12 entailed.

13 Q And do you have any knowledge of the
14 current status of the Port's discussion with the
15 Arts Consortium regarding building 113?

16 A The last piece of information that I
17 have as a member of the committee is that the
18 exclusive rights to negotiate with the Arts
19 Consortium and the concurrent private developer
20 have concluded.

21 Q Concluded successfully or
22 unsuccessfully?

23 A They are not moving forward any further
24 with those proposals.

25 COMMISSIONER PERNELL: Excuse me,

1 Mr. Carroll, what document are you referring to?

2 MR. CARROLL: This is a June 5th, titled
3 Memorandum. It's essentially a staff report from
4 Douglas Wong, executive director of the Port of
5 San Francisco, to the members of the Port
6 Commission.

7 COMMISSIONER PERNELL: And the report is
8 on building 113 rehab?

9 MR. CARROLL: The report is on the
10 development efforts of the Port with respect to
11 Pier 70, one of those efforts being a proposal
12 submitted by the San Francisco Arts Future
13 Consortium to rehabilitate building 113, the other
14 proposal being a proposal from AMB for commercial
15 development. The staff report details the
16 exclusive discussions that had gone on with those
17 two parties; in fact, that they had both fallen
18 through or concluded unsuccessfully, and includes
19 two proposed resolutions which were then adopted
20 by the Port Commission at its June 12th, 2002
21 hearing.

22 What I would ask -- I don't have a
23 witness, obviously, from the Port here to sponsor
24 this document, but what I would ask is that the
25 committee take notice of this and admit it into

1 the record, the staff report. What I have here is
2 the staff report, proposed resolutions, and then
3 the minutes indicating that the resolutions were
4 adopted as proposed.

5 HEARING OFFICER VALKOSKY: Is there any
6 objection?

7 MS. MINOR: Actually, I am going to
8 object. We haven't seen the document, copies have
9 not been made available. We don't know the scope
10 of the issues being discussed. Pier 70 is a very
11 large site, obviously. It is not clear from
12 Mr. Carroll's testimony whether we're talking
13 about multiple buildings or one building that was
14 involved in the dollar amount he cited as the
15 rehab cost.

16 HEARING OFFICER VALKOSKY: I think since
17 we are going to have a continued session on
18 cultural resources, why don't you hold off the
19 introduction of that when, as I understand, the
20 City will have additional witnesses as well as a
21 cost estimate on behalf of the Port.

22 MR. CARROLL: I'd be happy to do that.

23 HEARING OFFICER VALKOSKY: Okay.

24 COMMISSIONER PERNELL: Keeping in mind
25 that we're concentrating on building 113.

1 MS. MINOR: That's correct, and that's
2 the building that you've asked for an estimate.

3 COMMISSIONER PERNELL: Right, not the
4 whole Pier 70.

5 MS. MINOR: Exactly.

6 MR. CARROLL: That actually concludes my
7 questions. Thank you, all of you.

8 HEARING OFFICER VALKOSKY:
9 Mr. Westerfield?

10 MR. WESTERFIELD: Thank you,
11 Mr. Valkosky. I just have a few questions.

12 Good morning.

13 THE WITNESSES: Good morning.

14 MR. WESTERFIELD: Well, good afternoon,
15 sorry about that. And I think I'm going to direct
16 my questions to Mr. Chase to begin with, just as
17 someone to orient with, but certainly if anyone
18 else has something to contribute or add, I'd be
19 happy to hear it.

20 CROSS-EXAMINATION

21 BY MR. WESTERFIELD:

22 Q I'm trying to sort of digest some of
23 this testimony about determining the significance
24 or evaluating the significance of the meter house
25 and the compressor house in terms of the larger

1 district, but also seeing how moving them or
2 altering them somehow diminishes or even destroys
3 their historical significance.

4 I think, in thinking about that, it
5 seems to me that the City or the testimony might
6 want it both ways, because Mr. Chase, as I
7 understand your testimony, I think you say when it
8 comes to moving the meter house or the compressor
9 house even slightly, that somehow would create a
10 false sense of history that destroys the
11 significance of those buildings. And yet I also
12 hear from other testimony that these buildings
13 need to be considered broadly, in terms of the
14 entire district, and that, in fact, Mirant has
15 been too restrictive in understanding the
16 significance of these buildings.

17 So, to me, there is a little disconnect.
18 Can you help me to understand that better?

19 A Yes, sir. First off, I'd like to point
20 to the National Register bulletin that we talked
21 about on a number of instances, bulletin number
22 15, in dealing with the criteria for consideration
23 of moved properties.

24 And the primary issue here is the
25 association dependence on site. For a property

1 whose design values or historical associations are
2 directly dependent upon its location, any move
3 will cause the property to lose its integrity and
4 prevent it from conveying its significance. And
5 that's one of the principal that I have used in
6 making the statements that I have made.

7 And that I believe that yes, there may
8 be some leeway within a few feet, if it creates or
9 does not devalue the larger understanding of how
10 these buildings as a complex of buildings worked.
11 To just simply pick up the meter house and the
12 compressor house and move them to another location
13 without being informed by their other component
14 parts -- station A being a major integral part of
15 that -- that it does lose its integrity.

16 That it also establishes a false
17 environment for the other surrounding historic
18 resources that it may be placed near or adjacent
19 to.

20 Q Okay. Is it your opinion that these
21 buildings have sort of a broader significance than
22 simply their association with the manufacturer or
23 gas industry? Should they be considered in a
24 broader context?

25 A And the answer to that is yes, they

1 should be considered in a broader context. They
2 are part of what we have described this morning as
3 a larger district of a heavy industrial nature,
4 and they do inform us about the construction type,
5 the materials used in that broader district.

6 As Dr. Groth has indicated to you in his
7 testimony, the larger issues and the interweaving
8 of both land ownership, land use, and the
9 industrial development of the larger area.

10 Q Yes, I think I heard earlier testimony
11 about they supply some of the texture and the grit
12 to this industrial area by being there.

13 A That's correct.

14 Q So why would it be that moving them,
15 say, somewhere else on the Mirant property,
16 somehow destroys their contribution to the texture
17 and grit of the industrial district?

18 A Because their site would not -- their
19 location would not be authentic to its gas
20 production, its historic use.

21 Q Okay. And because of that, they then
22 lose all significance.

23 A They don't lose all significance, but
24 they lose a component of their significance that
25 may reduce their value to less than contributing.

1 Q Is it your opinion that they do lose all
2 their value?

3 A Not all their value, but certainly, as a
4 part of the continuum that we have discussed, the
5 more appropriate treatment of the buildings is,
6 first, in their original location, their current
7 location, and then if they are relocated, is there
8 an available site for that to happen to meet the
9 larger conditions that we've talked about in the
10 last two days.

11 Q I'm also trying to get a sense of how to
12 calculate mitigation. So, again, Mr. Chase, I
13 think you gave the opinion in your prepared
14 testimony about mitigation, so I guess I'll direct
15 this to you.

16 And I think the way I'd like to propose
17 it is a very broad kind of fundamental question,
18 as we've talked about a lot of the details here,
19 we've looked at a lot of the trees here. I want
20 to look at the forest for a second.

21 I think the question of mitigation in my
22 mind really comes down to the balancing that was
23 maybe talked about earlier between the need for
24 electrical power in San Francisco, and balancing
25 that against the need to preserve historic

1 resources. And so I'm afraid what sometimes in my
2 mind it comes down to is really a question of
3 really money.

4 How much is it worth to society to save
5 this heritage? Who pays the cost and how much are
6 we going to ask them to pay? Now, I haven't asked
7 my question yet, really, and that's -- Let me try
8 and focus that a little bit better for you.

9 Now, let's assume that these buildings
10 have to be demolished, and I'm talking about the
11 compressor house and the meter house. Let's
12 assume that those two buildings only have
13 historical value and they need to be demolished.
14 How is the committee to calculate or judge how
15 much those buildings are worth? How do they value
16 those buildings in monetary terms?

17 A And specifically monetary?

18 Q Yes.

19 A Okay.

20 Q Because, I mean, I think by context of
21 this, I think it all comes down to money.

22 A Okay. And I will set aside and will
23 reserve the fact that there are other values for
24 the preservation of these buildings, that if one
25 deals with the hard dollar-and-cent loss of these

1 buildings, I think that in a very simplistic, if
2 we lived in a simplistic world that one might say
3 we have X number of square feet, cubic feet,
4 pounds of material.

5 And one can calculate the cost of (a),
6 the relocation of that, which we can do with our
7 technology and our ability to put dollars to those
8 quantities. And we could find another resource or
9 find that dollar value to contribute in some other
10 way. And let me just say that if you are looking
11 at a building, one would have to look at not only
12 the foundation cost, the seismic retrofit, the
13 rehabilitation to the secretary's standards, but
14 also, as we have been talking about energy, the
15 inherent energy that it has taken to manufacture
16 those elements.

17 Because we lose -- By the loss of that
18 material, by the demolition of those materials, we
19 lose something that we have not ordinarily taken
20 into account but we pay the price for, in dollars
21 and cents, for the manufacture of those goods,
22 those products, whether it be brick, whether it be
23 mortar, whether it be nails, glass, metal roofing.

24 So all of those features ought to be
25 taken into account in the compensation for the

1 loss of a building.

2 Q All right. I'll just probe one thing
3 you mentioned. You said -- It seems to me you
4 said you should take into account the cost of
5 relocation.

6 A Well, if relocation were part of the
7 scenario, but I corrected myself because we were
8 talking about demolition and total replacement.

9 Q So you would not take into account the
10 cost of relocation.

11 A I would not take into account the cost
12 of relocation, if relocation is not a part of your
13 scenario.

14 Q Well, I thought your testimony is that
15 if you relocate the buildings, they lose much of
16 their value, if not all of it.

17 A They do in relocation, but that has
18 nothing to do with the value that those buildings
19 contribute in their original location and what
20 they contribute in their original location as they
21 stand today, because that's what you're asking me
22 the question for is what is the value of the
23 building today.

24 Q Okay. So you talk in terms of the cost
25 of rehabilitation, if I understand you correctly;

1 is that right?

2 A Right.

3 Q And then the cost of mortar and brick
4 and the materials as well; is that what you were
5 saying?

6 A Right.

7 MS. MINOR: Can I just -- I think it
8 would be helpful if you restated the question, so
9 that we don't have to go back three responses to
10 know which question he's responding to.

11 MR. WESTERFIELD: Well, I'm just asking
12 about his responses, not --

13 MS. MINOR: Well, why don't -- I think
14 it would be helpful if it's clear that there is a
15 question that he's responding to.

16 HEARING OFFICER VALKOSKY: Well, why
17 don't we have a brief question that the witness
18 can respond to, or have a series of brief
19 questions. Can you do that?

20 MR. WESTERFIELD: Okay. My original
21 question was how does the committee calculate how
22 much to value the meter house and the compressor
23 house?

24 HEARING OFFICER VALKOSKY: Okay.

25 THE WITNESS: And the quantification of

1 the materials for the loss of that building.

2 BY MR. WESTERFIELD:

3 Q All right, and how do you put that in
4 dollars and cents?

5 A The cost of the brick, the mortar, the
6 steel, the glass, the foundations, the seismic
7 reinforcement components.

8 MR. WESTERFIELD: Okay. Are there any
9 other opinions by the witnesses here as to how to
10 answer that question? How the committee should
11 value the loss of these two historic resources?

12 WITNESS GROTH: In monetary terms?

13 MR. WESTERFIELD: In monetary terms.

14 WITNESS GROTH: I would defer to
15 Mr. Chase on that. He's the expert on that.

16 MR. WESTERFIELD: Okay. Mr. Ver Planck?

17 WITNESS VER PLANCK: I would do the
18 same.

19 MR. WESTERFIELD: I know it's a tough
20 question.

21 All right. Then I just have one other
22 question about the unreinforced masonry building
23 ordinance, and I'm having a tough time
24 understanding it. And I know it's relevant to
25 these buildings, and it seems to me now is the

1 time to try to clarify it. And so I wondered if
2 there are any witnesses who can help here.

3 Under the ordinance, as I understand it,
4 there is the option to either reinforce this
5 unreinforced masonry or demolish the building.
6 Whose choice is it under the ordinance to do that?

7 WITNESS CHASE: It is dependent upon
8 whether the resource has been recognized as a
9 historic resource, and whether it is protected by
10 other ordinances within the City and County of San
11 Francisco.

12 If you are dealing with a non-
13 recognized, non-designated resource, then it would
14 be the filing of a building permit application to
15 demolish.

16 BY MR. WESTERFIELD:

17 Q Well, we're talking about historic
18 resources here, the meter house and the compressor
19 house. So assuming that, can you answer the
20 question?

21 A The application would move forward if it
22 were -- it would go to the Landmarks Preservation
23 Advisory Board for review through the Planning
24 Commission, so it would require an approval
25 process by a number of appointed boards and

1 commissions.

2 Q Okay. So there is the choice of either
3 demolition or reinforcement, demolition or
4 reinforcement. And so when you say, I think, as I
5 understand it, the choice is -- Is it the choice
6 of the owner of the building to decide whether to
7 demolish or to reinforce it, or are you saying it
8 really is the choice of the City?

9 A There are requirements that all property
10 owners have to maintain their buildings in sound
11 structural order. Those regulations we all have
12 to live to. If you happen to own an unreinforced
13 masonry building, because of state statute there
14 are requirements for reinforcing those buildings
15 by a specific deadline. And in this case, these
16 buildings have been proffered an extension to
17 January 1, 2006.

18 It is the responsibility of the property
19 owner to either demolish the -- to seismically
20 retrofit and meet the current standards or apply
21 for a demolition permit.

22 Q Okay, and if the owner decides to apply
23 for a demolition permit and decides to demolish
24 it, does the City then have the discretion to deny
25 that permit and not allow them to demolish it?

1 MS. MINOR: Why don't you make it clear
2 whether you're asking a hypothetical question or
3 you're asking that question in the context of the
4 meter house and the compressor house.

5 MR. WESTERFIELD: Okay. We'll make it
6 hypothetical, that's fine.

7 MS. MINOR: Okay.

8 BY MR. WESTERFIELD:

9 Q Hypothetically, you've got two historic
10 resources, and the owner decides they want to
11 demolish it and they apply for a demolition
12 permit. Can the City essentially deny the
13 demolition permit?

14 A If it is listed on the unreinforced
15 masonry building survey listing, yes, the review
16 process could require that the buildings be
17 maintained and repaired.

18 WITNESS VER PLANCK: And in my
19 understanding -- Chris replying -- that's also a
20 grounds for extending the deadline for retrofit.
21 The building does have some sort of level of
22 significance as determined by this UMB survey that
23 was conducted I believe in 1993 or -4.

24 MR. WESTERFIELD: Okay.

25 HEARING OFFICER VALKOSKY: Okay. Let's

1 take it to a more specific level. Let's deal not
2 in a hypothetical, but with the meter house and
3 the compressor house.

4 The waiver expires on January 1, 2006.
5 Mirant decides that they don't want to retrofit,
6 seismically retrofit. They apply to the City for
7 a demolition permit. In that case, in dealing
8 with the existing structures which, as I
9 understand, are not listed but are eligible for
10 listing, would the City have the ability to deny
11 the demolition permit? Or what actions could the
12 City take?

13 WITNESS VER PLANCK: I think one
14 question that would have to be answered is what
15 rating were these buildings given in the UMB
16 survey.

17 WITNESS CHASE: But the simple answer is
18 yes.

19 HEARING OFFICER VALKOSKY: They could
20 deny the demolition permit?

21 WITNESS CHASE: Yes.

22 HEARING OFFICER VALKOSKY: Okay. By
23 denying the demolition permit, does the City then
24 require the property owner to retrofit?

25 WITNESS CHASE: They do not necessarily

1 require the retrofit, but you would have to
2 abandon any use and you would still have to
3 protect the public health and safety of workers or
4 occupants of the site.

5 HEARING OFFICER VALKOSKY: Okay. Now,
6 could that requirement be met by not having any
7 public or worker use and putting a suitable fence
8 around the area to prevent people from getting
9 access to it?

10 THE WITNESS: I can't say for sure, but
11 it's possible that there might be limits
12 established by that. Since I'm not a part of that
13 regulatory body, I can't tell you what the
14 building inspections office would require.

15 HEARING OFFICER VALKOSKY: Understood,
16 but it would, to your knowledge, focus on
17 protection of the public health and safety as the
18 primary concern?

19 THE WITNESS: Yes, it would.

20 HEARING OFFICER VALKOSKY: Thank you.

21 MR. WESTERFIELD: Those are all the
22 questions I have. Thank you.

23 HEARING OFFICER VALKOSKY: Okay.

24 Any redirect, Ms. Minor?

25 I'm sorry, gentlemen, you didn't sign up

1 for cross. That's why I overlooked --

2 Mr. Ramo.

3 MR. RAMO: I have just a few questions
4 in light of questions that have just been asked by
5 both the Commissioners and Commission staff.

6 Good afternoon, Mr. Chase and panel
7 members.

8 THE WITNESSES: Good afternoon.

9 CROSS-EXAMINATION

10 BY MR. RAMO:

11 Q Mr. Chase, is it your testimony that the
12 nature of the significant impact from demolishing
13 the buildings we've been discussing can be
14 quantified in dollars and cents?

15 A As I started the response to that
16 question from Mr. Westerfield, I think there are
17 other values for the protection of these buildings
18 for historic preservation that cannot always be
19 easily quantified. You can, and we do in many
20 instances in our daily lives, put dollars and
21 cents to brick and mortar. And, therefore, you
22 could qualify the loss of the buildings by
23 establishing a dollar fee through an itemized
24 quantified estimate.

25 Q I guess what I'm trying to get to, are

1 there intangible values that cannot be compensated
2 by dollars and cents associated with demolishing
3 these buildings?

4 A And the answer to that is yes. I think
5 Dr. Groth's testimony has clearly identified that
6 there is a larger district here that would suffer
7 as a result of the loss of these buildings.

8 Q So in devising -- I gather it's also
9 your testimony that it's your view and the panel's
10 view that the most effective mitigation now before
11 the Commission you believe is your approach to
12 mitigation as opposed to the other alternatives
13 that have been suggested.

14 A We believe that the -- what we have
15 offered does a couple of things. One is that it
16 allows for the district, and again, the given is
17 that it allows for the district, and again, let me
18 state that the given is that these buildings will
19 be demolished, that the removal of those buildings
20 from their site -- Let me back up.

21 The given is that it will be removed
22 from their site, whether through demolition or
23 through relocation, that the loss of the buildings
24 from their site deludes the historic nature of the
25 district, and that relocating the buildings in an

1 inappropriate location also deteriorates from the
2 quality and character that the other historic
3 resources currently enjoy.

4 Q So it's your view that your mitigation
5 approach is the most effective in addressing those
6 concerns?

7 A We believe it is the most effective.

8 Q Well, as I'm sure you all know from your
9 experience with the California Environmental
10 Quality Act, one of the alternatives before the
11 Commission is the no-project alternative. From a
12 cultural resources standpoint alone, if you had a
13 choice between no project and no demolition, or
14 the project as proposed by the applicant and
15 compensation that would go to rehabilitating the
16 machine shop, which would you prefer, the no-
17 project no-demolition alternative, or the project
18 and the compensation as you've proposed?

19 A To be perfectly honest with you, we have
20 not seen this as an either-or or a black-and-white
21 where the no-build total preservation issue was an
22 option.

23 Q Well, I'm asking you, I understand you
24 haven't thought about it before. I'm asking you
25 today, since it is an alternative before, a no

1 project, which would you as an expert, from your
2 professional standpoint, suggest to the Commission
3 is preferable, no demolition or demolish these
4 buildings and rehabilitate the machine shop?

5 A I think clearly what we would prefer is
6 that the buildings be adaptively used on their
7 current site, and allow a project -- there is a
8 middle ground here, and I don't think that there
9 is a preference to one, a no-construction activity
10 or a no-development activity.

11 Q Now, I want to make sure I understand
12 that answer. It seemed like at first you were
13 saying we'd prefer the no-project, but am I taking
14 your testimony correct that you're saying if the
15 project is going ahead you're trying to find a
16 middle ground?

17 A Let me clarify. The notion is that
18 there has been testimony in the last several days
19 with the potential of keeping the buildings where
20 they are and working a project development for the
21 development of the power plant around that, and
22 that certainly is an appropriate one that we
23 would -- in the retention of the buildings in
24 their current locations would be preferred, but we
25 have not given discussion or thought to no project

1 at all.

2 Q Okay. Now, if the Commission is open to
3 your approach -- Let's say the Commission rejects
4 the no-project alternative and is open to your
5 approach of mitigation, and so at that point it
6 focuses on the issue of how much money -- not to
7 eliminate significant impacts, but in terms of
8 coming up with the most reasonable effective
9 mitigation, they're trying to consider how much
10 money is reasonable to expect an applicant or
11 project developer to pay to rehabilitate this
12 site.

13 What criteria do you think the
14 Commission should use in coming up with the
15 appropriate money figure that's reasonable? And
16 I'll address that to anybody on the panel.

17 WITNESS VER PLANCK: Beyond the cost of
18 moving it?

19 BY MR. RAMO:

20 Q Sorry?

21 A I mean, it seems to me that the figure
22 we've been discussing has been the cost of moving
23 these two buildings and using that money instead
24 to rehabilitate building 113. I mean, that's sort
25 of been our baseline.

1 Q So you're saying one criteria would be
2 the amount that it would take to relocate,
3 notwithstanding whether that would be sufficient
4 to fully rehabilitate the building, 113?

5 WITNESS CHASE: Again, we have no
6 definitive cost estimate on building 113, so it's
7 not trying to match the dollars and cents. We
8 have X amount of dollars, this is the appropriate
9 building to do. We've taken another road and said
10 that 113 is, if not the, very closely being the
11 definitive resource in the Pier 70 area or within
12 this area of similar scale to the buildings on the
13 Potrero power plant site that ought to receive
14 attention, and that that's where the money should
15 go, because of similar building characteristics,
16 because of similar articulation.

17 And if the Commission were to agree with
18 us and those funds made available, it would go
19 towards the entire project. It may not fulfill
20 all of the costs. We don't know that at this
21 point in time.

22 BY MR. RAMO:

23 Q So one of your considerations, I gather,
24 would be the relocation cost. It wouldn't be an
25 exclusive consideration, but it would be one

1 factor you would look at; is that correct?

2 A (No audible response.)

3 Q And another factor --

4 MR. WESTERFIELD: I'm sorry, that answer
5 was not clear on the record.

6 THE WITNESS: That's correct.

7 MR. WESTERFIELD: Thank you.

8 BY MR. RAMO:

9 Q And another factor you would look at,
10 again, would not be exclusive but would be a
11 factor to consider would be the total cost of
12 rehabilitating building 113; is that correct?

13 A I think our discussion was just the
14 opposite, it was looking at the meter house. In
15 my testimony with the questions from
16 Mr. Westerfield was the cost of the meter house
17 and compressor house values, the value of that
18 attributed to building 113.

19 Q I understand that, but wouldn't you
20 consider the total cost of rehabilitation as a
21 factor that you would expect the Commission to
22 look at in determining the amount of mitigation?

23 A I mean, in -- I think we would all like
24 to have an open wallet, but I think that the issue
25 here was looking at the resources that we would

1 lose in this process, which is the compressor
2 house, building 113, and station A, the remnants
3 of station A, and those values that might be
4 attributed to an important resource, which is
5 building 113.

6 Q In your professional experience in
7 designing or evaluating mitigation for a project's
8 effects, is the size of a project in terms of
9 capital expense a factor that you believe ought to
10 bear on the amount of money spent on mitigation?

11 A Would you repeat the question?

12 Q Yes. In your professional experience in
13 evaluating or designing mitigation for a
14 development project, do you believe the size of
15 the capital expense of the project ought to be a
16 factor in a government body determining the amount
17 of money devoted to mitigation?

18 A My belief is that the compensation
19 should be equivalent to the loss of the resource.

20 MR. RAMO: Okay, thank you. I have no
21 further questions.

22 HEARING OFFICER VALKOSKY: Mr. Rostov?

23 MR. ROSTOV: I just have a couple of
24 questions.

25 HEARING OFFICER VALKOSKY: Go ahead.

1 CROSS-EXAMINATION

2 BY MR. ROSTOV:

3 Q The value of historical resources is --
4 Am I correct to assume that the value of a
5 historical resource is more than its components,
6 than the brick and mortar, that there are other
7 values? I mean, there's more than an economic
8 value to the brick and the mortar.

9 Let me start over. The question is,
10 when you try to assign an economic value to a
11 historical resource, you could look at just the
12 brick and the mortar, but there are also other
13 values like historical preservation that would
14 need a value as well, if you're trying to estimate
15 a cost of demolition or something?

16 WITNESS CHASE: Yes, there are other
17 values. Unfortunately, in our society we have not
18 placed a dollar value on that. We are not, I hope
19 we never become so callous to attribute everything
20 that we believe in to dollars and cents.

21 There is a component of our economy, and
22 San Francisco is a very good case in point, that
23 we garner our city's well being, economic well
24 being, based upon heritage tourism. People come
25 to San Francisco because of the environments that

1 we have protected over the years. Those are
2 somewhat quantifiable but they are harder to pin
3 down than the brick and mortar.

4 We have the -- We enjoy the city. So do
5 others coming to the city, they find it attractive
6 because of the resources that we have protected.
7 And those are values that we don't put dollars and
8 cents to.

9 BY MR. ROSTOV:

10 Q But if we are talking hypothetically
11 about the demolition of these buildings, it would
12 be important to include that in the calculus,
13 those values. At least, I know you can never get
14 exact, but it would be -- you would have to assign
15 some value to these other things that are more --
16 that are specifically assigned a value, like the
17 mortar. I mean, there are some cultural values
18 that should be -- Should those values be a
19 criteria for assessing the economic value of these
20 buildings, the cultural heritage, the tourism?

21 Do you understand my question or should
22 I repeat it?

23 A I think you should repeat it.

24 Q I'm trying to say that -- I'm just
25 trying to understand your testimony. It seems to

1 Mr. Westerfield you were trying to say the value
2 of the meter house, if you assessed it
3 economically, it was just brick and mortar. But
4 if I understood what you were saying earlier,
5 there are also values like preservation and
6 historical significance, and now you're talking
7 about cultural history.

8 And even though those aren't easily
9 assigned an economic value, my question is would
10 those be a criteria when you're trying to assess
11 the value of how much compensation you would give
12 for these types of buildings?

13 A They certainly should be a factor, but
14 the issue is that we do not have a scale or the
15 ability to attribute those values.

16 Q Okay.

17 HEARING OFFICER VALKOSKY: If I could,
18 just one minute. Mr. Chase, would you agree that
19 the proper weighting of these more intangible
20 values that we're talking about actually goes into
21 the decision whether to either preserve, relocate,
22 or to mitigate the worth of a resource, rather
23 than value in the sense of an economic value?

24 THE WITNESS: Yes, sir. I think that
25 that is an appropriate avenue to look at in

1 looking at those values, is that it helps
2 establish the direction that one would take in
3 making a determination.

4 HEARING OFFICER VALKOSKY: Okay, thank
5 you.

6 MR. ROSTOV: Thank you, I appreciate
7 that. I just have one more question, then.

8 BY MR. ROSTOV:

9 Q If I understand your testimony, you're
10 saying the destruction of these two buildings
11 would be a significant impact because they're
12 destroying historical buildings, and the
13 mitigation you're proposing for the Ironworks
14 building is not -- it's not really mitigation,
15 it's just compensation for -- it's more of a
16 compensation but it doesn't -- it will not allow
17 the destruction to be fully mitigated; is that
18 correct?

19 A My testimony indicated earlier that what
20 we put forward as mitigation would not cause the
21 effect to fall below significant.

22 MR. ROSTOV: Thank you.

23 COMMISSIONER KEESE: Mr. Chase, do you
24 agree that there is some level of compensation
25 following the panel's proposed mitigation

1 approach? There is some level of payment and some
2 extent to which other historic buildings would be
3 refurbished that would mitigate the demolition of
4 the meter house and the compressor house to a
5 less-than-significant level, if all of the
6 district were refurbished?

7 THE WITNESS: I'm not sure that I
8 understand your question.

9 COMMISSIONER KEESE: Hypothetically, if
10 Myron said, okay, for -- to demolish the
11 compressor house and meter house, we're going to
12 refurbish your entire proposed district? It's
13 quite a compensation package; wouldn't you agree?

14 THE WITNESS: Yes, that's a significant
15 one.

16 COMMISSIONER KEESE: Does that, then,
17 mean that the demolition of the two structures is
18 now something less than significant, when taken in
19 the broader context? I'll go back to that phrase
20 I used earlier, enriching the overall heritage of
21 this city?

22 THE WITNESS: I wish it were as easy to
23 say yes, it does enrich our entire heritage and
24 yes, it might. But the problem that we face is
25 that in the narrow scope of looking at the loss of

1 those buildings, it is a significant loss. And
2 the evaluative process of saying is, let's call
3 restoration, the rehabilitation of the larger
4 district compensation for that?

5 If you want to put dollars and cents to
6 it, yes. If you want to look at what we lose in
7 terms of our historic perspective, the values
8 associated with these buildings that talk to the
9 issue of an industrial district and their place in
10 history, I question whether that value can be
11 attributed and is appropriate. It's not an easy
12 answer.

13 COMMISSIONER KEESE: So is that a no?

14 THE WITNESS: It's a no.

15 COMMISSIONER KEESE: So there is no
16 upper bound? There is no --

17 THE WITNESS: I mean, we can talk --

18 COMMISSIONER KEESE: I'm just trying to
19 get a sense of --

20 THE WITNESS: Yeah, hypothetically it
21 would be wonderful.

22 COMMISSIONER KEESE: -- trying to get a
23 sense of the philosophy of your mitigation
24 approach.

25 THE WITNESS: Yeah, it would be

1 wonderful. What we're saying and why we propose
2 this is that there is a connection between these
3 buildings in all of the facets that we've talked
4 about over the last couple of days, in terms of
5 integrity, materials, workmanship, all of those
6 things that go into the labor, the people who
7 inform their design.

8 These are values and these are things
9 that can't easily be compensated for in dollars
10 and cents.

11 COMMISSIONER KEESE: Okay. One more
12 question: Your bricks and mortar valuation for
13 compensating for the loss of those buildings, is
14 that salvage value of the bricks? Is that salvage
15 value of the metal in the buildings? Is it what
16 it would cost to build that building new today?
17 Is it what it cost to build that building back in
18 '06 or '04, whatever it was?

19 THE WITNESS: It would be -- In my
20 estimation it would be the current cost for the
21 development of the materials to as close as our
22 current technologies would allow us to come to the
23 composition, the color, texture of the materials
24 within that building, and I mean foundation,
25 exterior masonry, windows, doors, roof materials,

1 that they be fabricated in such a way as to
2 reflect their historic condition.

3 So it would be today's values, to not
4 simply buy a brick that sort of looks like the
5 brick on this building.

6 COMMISSIONER KEESE: Okay, thank you.

7 COMMISSIONER PERNELL: No questions.

8 HEARING OFFICER VALKOSKY: Any redirect,
9 Ms. Minor?

10 MS. MINOR: No.

11 HEARING OFFICER VALKOSKY: Okay. Would
12 you like to move your exhibits?

13 MS. MINOR: Yes. The City moves into
14 the record Exhibit 36, which is the testimony and
15 exhibit for Charles Chase, Christopher Ver Planck,
16 and Dr. Paul Groth. In addition, we move that
17 Exhibit 49, which is the packet of substitute
18 exhibits for Christopher Ver Planck be moved into
19 the record.

20 HEARING OFFICER VALKOSKY: Is there
21 objection?

22 MR. CARROLL: No objection to the entry
23 of those exhibits. I do at some time have a
24 question about two other documents, the Dogpatch
25 survey and the Central Waterfront survey. A lot

1 of the testimony has centered around those
2 documents and no parties have moved those into the
3 record, and --

4 HEARING OFFICER VALKOSKY: Well, let's
5 dispense with these first.

6 MR. CARROLL: Sure.

7 HEARING OFFICER VALKOSKY: Objection to
8 receipt of the Exhibits 36 and 49?

9 MR. WESTERFIELD: No objection by staff.

10 HEARING OFFICER VALKOSKY: No objection
11 from any other parties? They are admitted.

12 Mr. Carroll?

13 MR. CARROLL: Yes. My question was
14 whether or not the City, and I guess the City is
15 not, because they weren't mentioned, intended to
16 sponsor those documents into the record. It
17 seemed as though these witnesses would have been
18 the most appropriate witnesses to sponsor them,
19 and it seems as though they should be in the
20 record since so much of what we've talked about in
21 the last couple of days ties back to those
22 documents.

23 HEARING OFFICER VALKOSKY: Ms. Minor,
24 any response?

25 MS. MINOR: We don't object to their

1 being admitted into the record. We actually did
2 not append them as exhibits to the testimonies of
3 any of our witnesses.

4 HEARING OFFICER VALKOSKY: Okay. Would
5 anyone object to those being admitted into the
6 record, any party? We're talking about the
7 Central, or identify the documents.

8 MS. MINOR: Yes.

9 MR. CARROLL: Yes. The first document
10 would be the Central Waterfront Cultural Resources
11 Survey, Summary Report and Draft Context Statement
12 dated October 2000-October 2001, prepared by the
13 San Francisco Planning Department. And the other
14 document is the Dogpatch Historic District Survey
15 dated September 2001, authored by Christopher Ver
16 Planck.

17 MR. WESTERFIELD: Well, I do have a
18 question about this. I mean, these are very
19 large, voluminous documents that we haven't had a
20 chance to sort of probe. So would the intention
21 then be for any of the parties to look within
22 these documents, find facts and materials buried
23 somewhere in them and then use them in their
24 arguments before the committee in their briefs?

25 HEARING OFFICER VALKOSKY: Well, I think

1 the intention is irrelevant. The fact is they,
2 according to Mr. Carroll and certainly something
3 that has been repeatedly mentioned over the last
4 day and a half, is that various witnesses have
5 referred to these two surveys. It's as simple as
6 that.

7 They are not in the evidentiary record.
8 Mr. Carroll believes they should be in the
9 evidentiary record if the City does not object,
10 and that's what I'm trying to ascertain, if either
11 of you are objecting to its admission.

12 MR. WESTERFIELD: I think it's
13 appropriate to admit those parts of these
14 documents that have been referred to in testimony
15 today and yesterday into the record and not admit
16 the rest of the documents into the record. So we
17 would object to the admission of the balance of
18 all of it.

19 HEARING OFFICER VALKOSKY: Do you have
20 any way of splitting it into parts?

21 MR. WESTERFIELD: Simply going back onto
22 the record and seeing where, in fact, they were
23 referred to.

24 HEARING OFFICER VALKOSKY: Okay. Your
25 position is understood.

1 MR. ROSTOV: I just had a procedural
2 question.

3 HEARING OFFICER VALKOSKY: Sure.

4 MR. ROSTOV: I mean, Mr. Carroll -- I
5 wasn't here for part of yesterday, but today
6 Mr. Carroll brought those documents to the
7 forefront in cross-examination. And when I used a
8 document in cross-examination or technical study,
9 we just entered that into the docket and it wasn't
10 placed into the record.

11 HEARING OFFICER VALKOSKY: That's
12 certainly another option.

13 MR. ROSTOV: So it seems to me maybe
14 that's -- just to be consistent.

15 MR. CARROLL: I think the distinction
16 here is that the authors of these documents have
17 been witnesses at these proceedings.

18 HEARING OFFICER VALKOSKY: Right, and do
19 we want to have the witnesses validate those,
20 authenticate those documents? I mean, that would
21 be the answer to the question right there. And if
22 the City wants to move them, we can move them and
23 accept them.

24 Ms. Minor?

25 COMMISSIONER PERNELL: Before we do

1 that --

2 MS. MINOR: I mean, I don't --

3 COMMISSIONER PERNELL: -- I'm confused.

4 MS. MINOR: Okay, yeah.

5 COMMISSIONER PERNELL: I think if we use
6 that approach, does that incorporate everything
7 that's in the documents?

8 HEARING OFFICER VALKOSKY: Yes, it does.

9 COMMISSIONER PERNELL: But then I think
10 staff has a point, that they haven't withdrew
11 everything, and does that mean in a brief, you
12 mention something that hasn't been covered here
13 that's in the document and we haven't admitted it
14 into record as authenticated?

15 HEARING OFFICER VALKOSKY: And that is
16 the case with anything. I mean, it doesn't have
17 to be -- That's provided that we admit the
18 contents of the exhibit for the record.
19 Regardless of whether or not that was highlighted
20 very well, that comes into the record.

21 COMMISSIONER PERNELL: But I think
22 Mr. Westerfield's point is if there's something --
23 and I don't want to put words in your mouth, but
24 my understanding is you haven't reviewed the
25 entirety of the document.

1 MR. WESTERFIELD: That's correct.

2 COMMISSIONER PERNELL: And your
3 suggestion is that it's acceptable, as long as it
4 is something that has already -- that some of
5 these witnesses have referenced in the record.

6 MR. WESTERFIELD: Exactly.

7 COMMISSIONER PERNELL: And now, if we
8 incorporate the entire document, does that then
9 eliminate your statement that if we incorporate
10 the entire document that it's everything in there,
11 in that document on the record?

12 HEARING OFFICER VALKOSKY: And the
13 answer to that is yes.

14 MR. ROSTOV: Mr. Valkosky --

15 COMMISSIONER PERNELL: I'm not sure that
16 that's --

17 MR. ROSTOV: I would like to join the
18 staff's objection to this limited extent. I
19 believe it would be a lot easier to address
20 Mr. Carroll's suggestion of admitting this in the
21 record if Mr. Carroll would pick out those
22 portions of the document that he believes weren't
23 identified or aren't relevant to not be considered
24 by the Commission, and since we're going to have
25 this matter continued until a later time, at that

1 time Mr. Carroll by then would be able to show
2 each party what portions he believes are relevant.
3 We would be able to look at them, he could offer
4 them.

5 My view is that the witness referred to
6 a particular section of the document. It would be
7 helpful for the record to have that portion in the
8 record so we could understand their testimony, and
9 to that limited extent it would seem relevant.
10 But to have the whole document now brought in,
11 when I haven't reviewed the whole document, I
12 don't know what else is in there and what's
13 lurking there.

14 HEARING OFFICER VALKOSKY: Yeah, I
15 understand. Mr. Carroll, you can either introduce
16 them as exhibits or they can be docketed, at which
17 time they form part of the administrative record.

18 MR. CARROLL: These documents, I'm
19 frankly sort of surprised. These are not mystery
20 documents. I believe both of these documents were
21 previously docketed in this matter a very long
22 time ago. They are mentioned extensively
23 throughout the prepared and oral testimony of the
24 witnesses, particularly the witnesses presented by
25 the City today.

1 And I am quite frankly perplexed why
2 documents that underpin so much of the testimony
3 that's been presented would be so objectionable to
4 entering into the record by the parties. And I
5 certainly don't think that the fact that one party
6 has not reviewed the entirety of the document is a
7 basis for not admitting it into the record. If
8 that is the standard, there are going to be a lot
9 of other exhibits coming down the road that we're
10 going to object to.

11 HEARING OFFICER VALKOSKY: Well, I'd
12 like to clarify that as not standard.

13 COMMISSIONER PERNELL: So what you're
14 saying is that these documents have been docketed
15 from the beginning of this proceeding.

16 MR. CARROLL: Well, not from the
17 beginning, but they were docketed at some point
18 during the course of these proceedings. I don't
19 have the precise docket dates on each of them, but
20 they have been docketed previously.

21 MS. MINOR: Well, I certainly am aware
22 of the fact that the Central Waterfront survey has
23 been docketed. I'm not aware that the Dogpatch
24 survey has been docketed. And, frankly, the
25 reason I hesitated when you asked me to move the

1 documents into evidence is we brought the Central
2 Waterfront survey with us. We did not bring the
3 Dogpatch survey with us. I don't believe it's a
4 correct representation to say that our testimony
5 referred extensively to those surveys. It did
6 not.

7 HEARING OFFICER VALKOSKY: Okay, but
8 you're saying that the Central Waterfront --

9 MS. MINOR: Has been docketed.

10 HEARING OFFICER VALKOSKY: It has been
11 docketed?

12 MS. MINOR: It has been docketed. I'm
13 not aware that the Dogpatch survey has been
14 docketed.

15 HEARING OFFICER VALKOSKY: Okay. Well,
16 dealing just with the Central Waterfront, would
17 your witnesses like to authenticate it and would
18 you like to move it into evidence?

19 MS. MINOR: I would actually prefer to
20 await the continuation of cultural resources to
21 have someone authenticate it, and the reason for
22 this is because as our witness was going through
23 the document, trying to respond to Mr. Carroll's
24 questions, I had a question in my mind as to
25 whether or not the copy in front of us had been

1 copied accurately and was a complete
2 representation of the document.

3 It's a huge document and for whatever
4 reason, most of the pages aren't numbered.

5 COMMISSIONER PERNELL: Is it a draft?
6 Does it say draft on it?

7 MS. MINOR: Well, it does say draft.

8 Has it been finalized?

9 WITNESS VER PLANCK: Yes, it has.

10 MS. MINOR: It has been finalized?

11 WITNESS VER PLANCK: I believe it has.

12 MS. MINOR: Okay. Well, that's even
13 more reason to wait.

14 HEARING OFFICER VALKOSKY: So you do not
15 have the final version in front of you today?

16 MS. MINOR: That's right, and one has
17 been docketed as a draft. I wasn't even aware
18 that it had been finalized.

19 HEARING OFFICER VALKOSKY: Okay. From
20 my point of view I see no reason -- They are not
21 eligible for -- I mean, exhibits, especially in
22 light of the fact that one is apparently already
23 docketed and we're not sure about the other one.

24 MR. CARROLL: I believe Mr. Boss, who
25 just walked into the room, is the party who

1 docketed the Dogpatch survey; is that -- Maybe we
2 can --

3 HEARING OFFICER VALKOSKY: Okay. That's
4 okay, Mr. Boss.

5 COMMISSIONER PERNELL: Can we go off the
6 record?

7 HEARING OFFICER VALKOSKY: Yes.

8 (Brief recess.)

9 HEARING OFFICER VALKOSKY: At such time
10 that we continue with cultural resources, we will
11 be able to quote the Dogpatch and the Central
12 Waterfront study upon motion by the parties.

13 Okay. We admitted 36 and 49. Is there
14 any public comment in the area of cultural
15 resources?

16 Seeing none, we will move off that topic
17 and we will take a luncheon recess until 2:00
18 o'clock.

19 (Thereupon, the witness was
20 excused from the stand.)

21 HEARING OFFICER VALKOSKY: After lunch
22 we will resume with hazardous materials.

23 MS. MINOR: Before we go off the record,
24 should we plan to have our waste management
25 witnesses here this afternoon?

1 HEARING OFFICER VALKOSKY: If I'm going
2 on a scale of one to ten as the best answer, I'd
3 say that the chances of us getting to waste
4 management at a reasonable hour are somewhere down
5 around .5.

6 (Laughter.)

7 COMMISSIONER PERNELL: I would just say
8 be prepared.

9 MS. MINOR: Be prepared, maybe?

10 COMMISSIONER PERNELL: Be prepared.

11 MS. MINOR: Okay.

12 (Thereupon, the luncheon recess was
13 held off the record.)

14 --oOo--

1 A F T E R N O O N S E S S I O N

2 COMMISSIONER PERNELL: Mr. Valkosky.

3 HEARING OFFICER VALKOSKY: Thank you,
4 Commissioner.5 Just briefly, turning your attention to
6 the handout entitled Revised Attachment D, the
7 topic we'll deal with this afternoon is hazardous
8 materials. I have been informed that the
9 Neighboring Property Owners Coalition, indicated
10 as NPOC, will not do any cross-examination, so we
11 can cross that line off.12 After that correction, are there any
13 more changes? Mr. Carroll, just to the haz mat
14 section?

15 MR. CARROLL: No.

16 HEARING OFFICER VALKOSKY:
17 Mr. Westerfield?18 MR. WESTERFIELD: We might need a bit
19 more than 15 minutes on direct.20 HEARING OFFICER VALKOSKY: Okay. What's
21 your guess, 30 minutes?

22 MR. WESTERFIELD: Thirty minutes.

23 HEARING OFFICER VALKOSKY: Okay.
24 Ms. Minor?

25 MS. MINOR: No changes.

1 HEARING OFFICER VALKOSKY: Okay.

2 Mr. Carroll, begin. Call your witness.

3 MR. CARROLL: The applicant calls John
4 Lague to testify in the area of hazardous
5 materials management. We ask that the witness be
6 sworn.

7 THE REPORTER: Raise your right hand,
8 please.

9 Whereupon,

10 JOHN LAGUE

11 Was called as a witness herein and, after first
12 being duly sworn, was examined and testified as
13 follows:

14 DIRECT EXAMINATION

15 BY MR. CARROLL:

16 Q Mr. Lague, would you please state your
17 full name, title, and employer.

18 A My name is John Lague. I work for URS
19 Corporation as a senior air quality consultant.

20 Q And could you briefly summarize your
21 qualifications for us.

22 A I've worked in the environmental
23 consulting field for about 31 years. I have
24 received a bachelor's in physical sciences from
25 the University of California at Davis in 1970, and

1 a master's degree in meteorology from
2 Massachusetts -- Did I say Massachusetts
3 Institute? I meant University of California at
4 Davis is where I got my bachelor, and I got a
5 master's degree at Massachusetts Institute of
6 Technology in meteorology.

7 Q And are you the same John Lague that
8 submitted prepared testimony in this proceeding,
9 which is now a portion of what's been labeled as
10 Exhibit 28?

11 A Yes, I have.

12 MR. CARROLL: Before commencing with Mr.
13 Lague's testimony, I would like to make one
14 typographical correction to the prepared
15 testimony. At page nine, line 27, in the
16 reference to docket number 21027, there are two
17 figures transposed there. The correct reference
18 should be 21207.

19 BY MR. CARROLL:

20 Q Mr. Lague, if I were to ask you the
21 questions contained in your prepared testimony
22 under oath today, would your answers be the same,
23 including that correction that I just made?

24 A Yes.

25 Q And am I correct that you are also

1 sponsoring a number of exhibits that are
2 identified in your prepared testimony?

3 A Yes.

4 Q And are you also sponsoring the
5 following additional exhibits that were not
6 identified in your prepared testimony, copies of
7 which I've just distributed to the parties and the
8 committee, including the response to the Dogpatch
9 Neighborhood Association data request 84, which is
10 a portion of what's been marked as Exhibit Seven,
11 a response to Potrero Boosters Neighborhood
12 Association data request number 50, which is a
13 portion of what's been marked as Exhibit Six, and
14 responses to City and County of San Francisco data
15 requests 34 and 35, which are portions of what's
16 been marked as Exhibit Nine?

17 A Yes.

18 Q And, just to be clear, section 8.12 of
19 the AFC pertaining to hazardous materials
20 management that you're sponsoring is as amended by
21 the station A amendment, which is Exhibit 15?

22 A That's correct.

23 Q Okay. Could you please provide a brief
24 description of the analysis that you completed
25 with respect to the Unit Seven project in your

1 conclusions.

2 A My initial involvement in this project
3 was in directing and supervising the preparation
4 of section 8.12, hazardous materials management,
5 for the Potrero Unit Seven project. That section
6 involved the identification of the hazardous
7 materials that will be on the site as a result of
8 the project, during construction and operation,
9 and the measures that are going to be included in
10 the project design to minimize the potential for a
11 release of hazardous materials, and the measures
12 also to minimize the magnitude of the consequences
13 if there were such a release.

14 And finally, the section includes a
15 modeling analysis or an off-site consequence
16 analysis to evaluate the potential impacts,
17 whether there would be significant impacts off the
18 site, if a worst case or other normal release
19 could occur.

20 The gist of the analysis was that even
21 if we make very conservative assumptions regarding
22 the type of release and the environmental
23 circumstances under which it would occur, we could
24 not predict the concentrations that are in excess
25 of the short-term public emergency limit, STPEL

1 concentration for ammonia. This would indicate
2 that the project as proposed would contain
3 sufficient mitigation measures to avoid a
4 significant off-site impact.

5 After the publication of the AFC, I
6 directed and supervised the preparation of the
7 data request responses in hazardous materials
8 management, those responses confirmed and
9 elaborated on the conclusions that were presented
10 in the AFC. And finally, since then, subsequent
11 to the data request process, we did a couple of
12 additional analyses. One was to incorporate a
13 temperature correction factor in the calculation
14 that we made of the off-site consequences of a
15 worst-case release.

16 It is an extremely rare occurrence when
17 this would be considered reasonable, but it
18 reflects the fact that the impacts could be
19 different under very warm, ambient conditions.
20 And so we wanted to submit the results to reflect
21 that, even acknowledging that the combination of
22 these conditions with other assumed conditions was
23 very unlikely. But again, the worst-case
24 simulation showed that the level of concern and
25 concentration for ammonia would remain within the

1 project boundaries.

2 Finally, we did a small evaluation of
3 the transportation risks associated with the
4 transport of ammonia to and from the site by
5 tanker truck to support the use of ammonia in the
6 SCR system that will be -- that is proposed as a
7 control measure for oxides of nitrogen from the
8 power plant. And the analysis showed that the
9 likelihood of an accident of any kind involving
10 those trucks was on the order of once in 2500
11 years. And that includes any accident, whether or
12 not there was a spill.

13 So overall, the series of analyses I've
14 just described concluded that this project, as
15 designed and as it is similar to many other
16 projects that the Commission has heard about over
17 the last few years, will not cause a significant
18 impact due to a release of hazardous materials.

19 Q Thank you. And are there any other
20 hazardous materials that would be present on site
21 in any significant quantities, other than ammonia?

22 A There are several other hazardous
23 materials, including some of the chemicals that
24 are to be used for treatment of the water, there
25 are some chemicals that are used to treat to

1 boiler, pH for the boiler water, and there are
2 also chemicals to control the pH and properties of
3 the cooling water. Those are the main ones.

4 Q And are those present in quantities
5 significant to warrant doing an off-site
6 consequence analysis of a release?

7 A They are not.

8 Q Okay. Have you reviewed and are you
9 familiar with the contents of the prepared
10 testimony of Sue Drost Cone, Richard J. Lee, and
11 Stephen R. Radis, filed by the City and County of
12 San Francisco?

13 A Yes, I am.

14 Q All three of these witnesses recommend
15 use of a 35-ppm limit at the fence line as an
16 appropriate level of significance. First let me
17 ask you, what was the level of significance that
18 you used in your off-site consequence analysis?

19 A We used the value of 75 ppm, which was
20 also the value recommended in the staff assessment
21 for the -- by the CEC.

22 Q And what is your response to the
23 proposal of the City's witnesses to use 35 ppm as
24 opposed to 75 ppm?

25 A I believe that it is unnecessary to go

1 to 335 parts per million. Because of the
2 extremely low probability of occurrence of an
3 event which could cause even that level of
4 concentration to go off the site, I believe I
5 concur with the reasoning that's in the CEC staff
6 assessment, which is that the 75 parts per million
7 strikes the appropriate balance between public
8 protection and the cost of mitigating against
9 events that are so unlikely to occur.

10 Q And have you been involved in permitting
11 similar projects outside of the City of San
12 Francisco?

13 A Yes, I have.

14 Q And what is the significance level that
15 you typically use in projects outside the City of
16 San Francisco?

17 A The projects I've permitted in Contra
18 Costa County and in San Diego County, the
19 criterion was 200 parts per million for aqueous
20 ammonia.

21 Q Thank you. In her prepared testimony,
22 Ms. Cone recommends using something called RMP
23 comp to model the consequences of an ammonia
24 release. Is that the model that you used in your
25 analysis?

1 A No. We used the Environmental
2 Protection Agency's screen 3 dispersion model.

3 Q And could you please explain the
4 distinction between RMP comp and screen 3 and the
5 differences and the results that you would expect
6 to see from those models?

7 A Yes. I believe that in the context
8 we're talking about here, the main difference is
9 that the RMP comp is an extremely conservative --
10 Actually, the modeling that's in the RMP comp
11 model has already been done for this kind of
12 release. It essentially is a lookup table that if
13 you release a certain amount of ammonia and there
14 are one or two discriminating things, whether it's
15 an urban area or rural area, you get to specify,
16 but almost everything else about the spill is
17 already preassumed to be some standard spill.

18 So that basically, whatever amount of
19 material gets released, it's just assumed to
20 spread out over the ground, which ignores many of
21 the -- well, ignores the main control measures and
22 mitigation measures that have built into the
23 project.

24 Another problem I have with RMP comp is
25 that it doesn't allow you to provide answers to

1 questions that we routinely are asked, which is
2 what is the concentration at the fence line, for
3 example, or at a given location. Because that
4 model calculates the concentrations at
5 predetermined locations, the closest being one-
6 tenth of a mile.

7 So those are the reasons, and I would,
8 in answer to the last part of your question, I
9 would expect RMP comp to produce answers that are
10 very much higher than the answers that we get when
11 we use a model like screen 3 that did at least
12 allow us to acknowledge some aspects of the
13 geometry and the facilities on a site-specific
14 level.

15 Q Okay, thank you. Does that complete
16 your testimony here today?

17 A Yes.

18 MR. CARROLL: John Lague is now tendered
19 for cross-examination in the area of hazardous
20 materials management.

21 HEARING OFFICER VALKOSKY: Thank you.
22 And following our practice, I'd like to get some
23 things clarified.

24 When will the final design of the
25 project be completed?

1 THE WITNESS: When will the final
2 design? I don't really -- I'm really not privy to
3 that information, but --

4 HEARING OFFICER VALKOSKY: Okay. Well,
5 let me back up. As I understand your testimony,
6 that certain of the safety and the risk management
7 plans will incorporate measures reflected in the
8 project's final design; is that correct?

9 THE WITNESS: Yes.

10 HEARING OFFICER VALKOSKY: Okay. So no
11 one will know the contents of these plans until
12 the final design is completed; is that also
13 correct?

14 THE WITNESS: To a point, yes. I mean,
15 in fact, in this case it's the City and County
16 Health Services Department, which we will submit
17 that plan too, and judging from how that process
18 has gone in the past, from what I know about that,
19 there is a back-and-forth during that process
20 where, if they decide that you need different
21 mitigation than what you've proposed, then you
22 negotiate that and come up with a solution.

23 HEARING OFFICER VALKOSKY: Okay. Well,
24 that's what I want to know. So that iterative
25 process will occur with the City and County and I

1 assume with Commission staff also; is that
2 correct?

3 THE WITNESS: Yes. I mean, there is a
4 proposed condition of certification that says we
5 need to do an RMP, and even if there weren't,
6 under the federal and state rules, we would be
7 required to.

8 HEARING OFFICER VALKOSKY: Okay, thank
9 you. Insofar as ammonia concentrations are
10 concerned, do you agree that the appropriate
11 design criteria is the resultant concentration at
12 the project fence line as opposed to the nearest
13 sensitive receptor?

14 THE WITNESS: The strict wording from I
15 guess it's the Clean Air Act, section 112(r) and
16 the interpretations that have followed that is
17 that the, what they call the toxic end point is
18 just to be, considered to be at the nearest public
19 receptor. And often, there are different opinions
20 about what that means.

21 So the safest thing is to try to design
22 for the fence line.

23 HEARING OFFICER VALKOSKY: Okay. And
24 that is, in fact, what you did in this case?

25 THE WITNESS: Yes.

1 HEARING OFFICER VALKOSKY: Okay. Now,
2 you mentioned that you used the 75 parts per
3 million as a guideline. Did you determine the
4 projected level of ammonia at the project fence
5 line in the revised analysis?

6 THE WITNESS: Yes. We predicted a
7 number like 68 parts per million.

8 HEARING OFFICER VALKOSKY: Sixty-eight
9 parts per million at the fence line?

10 THE WITNESS: Mm-hmm. And I would like
11 to stress that that only -- the reason I don't
12 have 34 parts per million is because I applied a
13 temperature correction factor that is appropriate
14 for temperatures above 25 degrees Centigrade,
15 which happen only one and a quarter percent of the
16 time.

17 HEARING OFFICER VALKOSKY: Okay. Just
18 as an aside, 25 degrees Centigrade converted to
19 Fahrenheit?

20 THE WITNESS: Seventy-seven.

21 HEARING OFFICER VALKOSKY: Seventy-
22 seven.

23 THE WITNESS: Mm-hmm.

24 HEARING OFFICER VALKOSKY: Okay.

25 THE WITNESS: And what I'm saying is

1 that most of the time, only 98.75 percent of the
2 time the increased emissions that came about as a
3 result of that temperature correction factor would
4 not be in effect. And, in fact, when you're below
5 25 degrees C, the emission rate would be lower.

6 HEARING OFFICER VALKOSKY: Okay. Lower
7 as in what level at the fence line?

8 THE WITNESS: Well, you know, it depends
9 on what temperature you were to assume, but the
10 value that we predict with the absolute highest
11 temperature that's been measured at the site is
12 68. And my intent in putting up the other thing
13 was that at all times when the temperature is less
14 than 77 degrees Fahrenheit, the answer, based on
15 our modeling analysis, would be 34.

16 HEARING OFFICER VALKOSKY: Okay, thank
17 you. Referring to the 35 parts per million level
18 proposed in San Francisco's testimony, as I
19 understand it, that level comes from an HMUPA
20 recommendation; is that correct?

21 THE WITNESS: I believe it's a -- I
22 forget what the acronym is, but I think it's the
23 National Institute of -- It's basically the
24 federal or the organization that sets worker
25 standards.

1 HEARING OFFICER VALKOSKY: Okay. Now,
2 what does that -- Expand upon that. What is that
3 standard, to your knowledge, applicable to?

4 THE WITNESS: The 35 part-per-million
5 level is where no toxicity is all it says in the
6 CEC report or the staff assessment, no toxicity
7 including the avoidance of irritation. In other
8 words, there is not even --

9 HEARING OFFICER VALKOSKY: As applied to
10 what segment of the populace?

11 THE WITNESS: Workers. Healthy adult
12 male workers.

13 HEARING OFFICER VALKOSKY: Okay. Based
14 on what expected exposure rate?

15 THE WITNESS: Something like 15 minutes,
16 four times a day.

17 HEARING OFFICER VALKOSKY: Fifteen
18 minutes, four times a day. Okay, thank you.

19 To your knowledge, is there any local
20 state or regional law, ordinance, regulation, or
21 standard which would make that standard applicable
22 to this project at the fence line?

23 THE WITNESS: Not for -- I would even
24 agree that that was a good standard if it were the
25 type of thing where people would be exposed to

1 that on a frequent or recurring basis. What we
2 have determined in our analysis is that putting
3 together the worst set of assumptions we can, that
4 number won't happen.

5 HEARING OFFICER VALKOSKY: Okay, but the
6 question was to your knowledge is there any --

7 THE WITNESS: Oh, no, I'm not aware.

8 HEARING OFFICER VALKOSKY: Okay. In
9 your opinion, should a risk analysis be based on
10 the risk of fatalities or the risk of injuries?

11 THE WITNESS: Both.

12 HEARING OFFICER VALKOSKY: Okay. Could
13 you explain that a little bit more?

14 THE WITNESS: Well, I think it's prudent
15 to look at the probability or effects of -- or to
16 compare your predicted impacts with criteria that
17 represent harm, other than death. But it's also
18 prudent to know where the level is that would
19 cause death. But we normally wouldn't be just
20 designing on the basis of death.

21 HEARING OFFICER VALKOSKY: Okay. Does
22 your risk analysis do this?

23 THE WITNESS: Our risk analysis was not
24 done in a probablistic way. What we did, as I
25 said, was put -- tell you the largest spill we

1 think this facility is capable of producing,
2 predict what the concentration at the fence line
3 would be as a result of that and compared it with
4 the different criteria.

5 As I said, we would meet this 35 parts
6 per millions anytime that the ambient temperature
7 was less than 77 or equal to 77 degrees, and there
8 is a small amount of time when it's higher than
9 that that we would predict up to, at this
10 extremely high temperature that we assumed, which
11 is 109 -- at 106 degrees Fahrenheit ambient, we
12 would predict as high as 68.

13 HEARING OFFICER VALKOSKY: Okay, and at
14 the 68 parts per million level, which I understand
15 your estimation is the worst case, are you
16 basing -- did you examine the risk of public
17 exposure on the risk of an injury to a member of
18 the public or a fatality to a member of the public
19 or both?

20 THE WITNESS: No. I mean, we don't have
21 a number that's at all comparable to a death
22 number. I mean, that would have to be in closer,
23 somewhere -- the 2000 parts per million, for
24 example, which is commonly used in --

25 HEARING OFFICER VALKOSKY: Okay, so --

1 THE WITNESS: -- would be, you know, up
2 close to the tanks.

3 HEARING OFFICER VALKOSKY: So the
4 standard would be based on irritation, a
5 noticeability to a member of the public?

6 THE WITNESS: Yes, yes.

7 HEARING OFFICER VALKOSKY: What health
8 effect happens to the public at the 68-parts-per-
9 million level?

10 THE WITNESS: Okay. Well, actually, I
11 want to look in here. Sixty-eight. The effects
12 that are listed for 64 parts per million are
13 tearing of the eyes, a noticeable and
14 uncomfortable odor, sensitive people experience
15 more irritation; mild eye, nose, or throat
16 irritation; ear, ear, and throat irritation to
17 sensitive people. And asthmatics may experience
18 breathing difficulties.

19 HEARING OFFICER VALKOSKY: Okay. Now,
20 would those health effects likely become more
21 severe at the 68 or even the 75 parts per million?

22 THE WITNESS: Slightly, yes.

23 HEARING OFFICER VALKOSKY: Okay,
24 slightly more severe?

25 THE WITNESS: Mm-hmm.

1 HEARING OFFICER VALKOSKY: But they
2 wouldn't change in their essential nature, other
3 than noticeable odor, tearing of eyes, etc.?

4 THE WITNESS: I don't know that there is
5 a set list of those effects at exactly 75 parts
6 per million.

7 HEARING OFFICER VALKOSKY: Okay. Well,
8 what I want to know is that if you get to the 75
9 parts per million, would the health effects to a
10 member of the public likely be significantly or
11 substantially worse than you described at 64 parts
12 per million?

13 THE WITNESS: No. It should be about
14 that. I mean, I don't know how much more.
15 Slightly more.

16 HEARING OFFICER VALKOSKY: Okay.

17 THE WITNESS: It's below the level that
18 would cause permanent harm or affect the ability
19 of most people to remove themselves from that
20 situation.

21 HEARING OFFICER VALKOSKY: Okay. And is
22 it anything that would lead to any sort of
23 permanent injury, the exposure at 68 or 75?

24 THE WITNESS: No.

25 HEARING OFFICER VALKOSKY: No, okay.

1 Are you familiar with the societal risk guidelines
2 mentioned in Mr. Radis's testimony?

3 THE WITNESS: I wasn't before I read his
4 testimony.

5 HEARING OFFICER VALKOSKY: Okay. Do you
6 feel that you're sufficiently familiar at this
7 point to comment upon their appropriateness for
8 use in this case?

9 THE WITNESS: Well, one thing I did
10 notice was that in his testimony Mr. Radis took
11 the criteria that were used in the transportation
12 risk portion of the staff assessment, which
13 identified -- the criteria they used were that it
14 would be significant if it would cause -- if there
15 was a one-in-a-hundred-thousand chance of causing
16 ten deaths, or one-in-a-million chance of causing
17 a hundred deaths.

18 He did look at that case, but he also
19 assumed that the same criteria would apply to
20 lower concentrations. In other words, that it
21 would be significant if there was a one-in-a-
22 hundred-thousand chance of going over 75 parts per
23 million or a one-in-a-million chance of -- well,
24 excuse me, one-in-a-hundred-thousand chance of
25 exposing ten people to a level of 75 parts per

1 million, which he called an injury level, and a
2 one-in-a-million chance of causing a hundred
3 people to experience that concentration. He said
4 either of those would also be significant, which
5 is sort of taking the criteria that were used in
6 the staff assessment and applying them to a much
7 lower concentration.

8 HEARING OFFICER VALKOSKY: Okay. So you
9 would disagree with Mr. Radis's application of
10 that methodology; is that fair?

11 THE WITNESS: Yes.

12 HEARING OFFICER VALKOSKY: Regarding
13 transportation risks, why was the length of the
14 route taken only from I believe it was 280 to the
15 plant site rather than from the distribution point
16 of the ammonia to the plant site?

17 THE WITNESS: Yes. Well, first of all,
18 from the point of view of writing the section for
19 the AFC, we usually look up the list of things
20 that are required to be in the hazardous materials
21 section. That has never, in any of the projects
22 I've worked on, been one of those things.

23 However, we did -- So we didn't address
24 transportation risks, and we actually did consult
25 with CEC to see whether that was likely to be

1 something that needed to be in there, and we were
2 told in most cases, no. However, we saw in the
3 workshops and so on and in the -- and apparently
4 the CEC staff did too, that that was a topic of
5 concern to the community, and so it did get
6 included in the staff assessment analysis.

7 And they included it in kind of a
8 generic way. They used some factors that say
9 there is a risk of having ten deaths this many
10 times -- so many times out of a million miles
11 traveled and so on. So they just multiplied the
12 travel distance by those factors and came up with
13 some probabilities of exposing people to ten
14 deaths or a hundred deaths.

15 And that analysis showed that there is a
16 very low probability of those things happening.
17 One thing we added in our last testimony was just
18 the fact that, you know, in our transportation
19 section of the AFC, there were statistics about
20 how often accidents happen on that route, and
21 specifically the intersections along that route.

22 So just for information, we added to my
23 testimony a calculation just to show that based on
24 the fact that there are, for example, in one of
25 the intersections there are eight million cars per

1 year that go through that intersection, we are
2 going to be adding about 70 loaded trips of
3 ammonia to that number, just to show that the
4 probability that there would be an accident of any
5 kind, even if there wasn't a spill, is extremely
6 low. And it came out to be about one in 2500
7 years.

8 HEARING OFFICER VALKOSKY: Okay, and
9 that's for the short portion of the route. So is
10 it your testimony that you agree with staff's
11 analysis for the longer portion of the route from
12 the distribution point to the exit off of 280?

13 THE WITNESS: To my knowledge, the staff
14 didn't look at the longer part of the route.

15 HEARING OFFICER VALKOSKY: Okay. In
16 your professional opinion, do you think you should
17 look at the longer part of the route in
18 determining the sufficiency of a transportation
19 risk analysis or in assessing the risks to
20 transportation?

21 THE WITNESS: It can be done. In my
22 experience, and like I said before, no one had
23 asked for it before on any of the other projects
24 I've worked on. And, I mean, it sort of almost
25 goes without saying that the incremental

1 probability of a risk is going to be very small
2 when you add one truck every five days to roads
3 like I-280 and the other connections to where the
4 ammonia suppliers are.

5 So, in my opinion, that's a matter
6 that's regulated by the Department of
7 Transportation or the Highway Patrol or CalTrans,
8 but it is not really part of this project.

9 HEARING OFFICER VALKOSKY: Okay. Let me
10 try again. In your opinion, should such an
11 analysis, if not done, have been done in this case
12 to adequately assess the transportation risks?

13 THE WITNESS: I guess I didn't think so,
14 because I didn't do it.

15 HEARING OFFICER VALKOSKY: Okay. That's
16 fine. The testimony indicates that measures will
17 be employed to prevent the accidental mixing of
18 ammonia, sulfuric acid and sodium hypochlorite.
19 Are you familiar with the measures that will be
20 employed to prevent that mixing?

21 THE WITNESS: Well, I'm aware that, and
22 I believe that what Mirant will do and they have
23 told me they will do is continue the practices
24 they have at present at the site, which is to
25 separate and clearly separate the different

1 chemicals, and to put berms around the ones that
2 are in tanks, and to put the small containers in
3 safe covered locations, and to keep them away from
4 power lines and that kind of thing.

5 And it would certainly be important, as
6 has been pointed out by staff and some of the
7 people at the City that you would want to keep
8 those chemicals away from ammonia. It looked to
9 me from being at the site where the ammonia trucks
10 could come in, there's a gate there, right near
11 the proposed site of the ammonia tank, that the
12 trucks could come down 23rd Street, turn left
13 right into where the ammonia tanks are, and they
14 wouldn't -- that ammonia truck wouldn't go
15 anywhere near where you would likely have those
16 other chemicals.

17 HEARING OFFICER VALKOSKY: Okay. So in
18 your opinion, then, are the methods identified by
19 Mirant sufficient to reduce any of the risks from
20 the accidental mixing below levels?

21 THE WITNESS: Yes.

22 HEARING OFFICER VALKOSKY: Okay, thank
23 you. Are you familiar with both the
24 transportation and the storage mitigations
25 proposed by Mr. Radis in his testimony?

1 THE WITNESS: Yes.

2 HEARING OFFICER VALKOSKY: Okay. What
3 I'd like you to do on the transportation methods
4 is to identify which of those measures you view as
5 infeasible or which you view as unnecessary.

6 And if there is a cost that's associated
7 with those, I'd like you to identify that too. I
8 can list the measures, or if you --

9 THE WITNESS: Okay.

10 HEARING OFFICER VALKOSKY: Okay. As I
11 have them, first would be the transportation
12 measures, the improved driver training and hiring.
13 Do you view that as unnecessary or infeasible and
14 is there a cost associated with it that you're
15 aware of?

16 THE WITNESS: I believe that that's a
17 feasible measure. I've talked to three companies
18 that deliver ammonia. They say that because they
19 also deliver aqueous ammonia, the drivers who do
20 that are routinely, I guess it's certified by that
21 California Fertilizer Association. And so I view
22 that as a mitigation measure that is doable and
23 that would not have a cost.

24 HEARING OFFICER VALKOSKY: Okay. So in
25 other words, that would be specifying

1 certification by the CFA?

2 THE WITNESS: Mm-hmm.

3 HEARING OFFICER VALKOSKY: Okay. How
4 about improved inspection and maintenance of the
5 vehicles?

6 THE WITNESS: I guess that's sort of
7 open-ended. I don't really know what would be
8 asked of the companies delivering the ammonia to
9 do that they don't already do.

10 HEARING OFFICER VALKOSKY: Okay. So
11 it's just, you really have no opinion because it's
12 too indefinite, okay.

13 How about weekend daytime deliveries
14 only of ammonia?

15 THE WITNESS: I can see that as having
16 some possible inconvenience factor to it, but I
17 don't see that as a difficult or -- I think the
18 goal there is trying to -- if the goal there to
19 doing that is to reduce the times that you're
20 there when it's difficult to see or when there
21 might be more hazard, then that seems like a
22 reasonable one.

23 HEARING OFFICER VALKOSKY: Okay. So the
24 only objection would be one of inconvenience,
25 correct?

1 THE WITNESS: It could be. I mean, it
2 would be just for the delivery company.

3 HEARING OFFICER VALKOSKY: Okay. How
4 about an improved trailer design, assume the
5 tanker/trailer?

6 THE WITNESS: I'm not aware of the need
7 for that.

8 HEARING OFFICER VALKOSKY: Okay. As I
9 understand the conditions, they're requiring a
10 glass, or category 307 truck. So in your opinion,
11 that's a sufficiently sturdy tanker?

12 THE WITNESS: Yes, I think it is,
13 mm-hmm.

14 HEARING OFFICER VALKOSKY: Okay. Any
15 opinion on the use of a 20-percent solution of
16 aqueous ammonia?

17 THE WITNESS: Well, that would be a
18 mixed blessing. What works in the SCR that the
19 ammonia is used for is the quantity of ammonia,
20 not the quantity of the solution. And so if you
21 were to dilute the ammonia more, you would indeed,
22 at every turn where you have a vessel, you would
23 have less dangerous chemical in that vessel at the
24 time.

25 But, of course, you would have to bring

1 more trips of that truck, more truck trips in
2 order to get the same amount of ammonia. Because
3 what makes the SCR work is not the solution, it's
4 the ammonia.

5 HEARING OFFICER VALKOSKY: And any
6 opinion which -- My understanding is it's a
7 tradeoff. Is there any opinion which part of the
8 tradeoff would reduce the risks more? I mean,
9 you're evaluating the extra deliveries and more
10 use of or more refilling and things of ammonia.
11 So do you have any opinion as to which is which,
12 from a risk reduction perspective?

13 THE WITNESS: I think from a risk
14 reduction point of view, having modeled the 29
15 percent and seeing the results that I talked about
16 before, I would opt for reducing the frequency of
17 the truck trips, because it's already been
18 determined, at least to my satisfaction, that the
19 impacts from 29 percent would be acceptable.

20 HEARING OFFICER VALKOSKY: Okay. So
21 you'd basically say that's unnecessary, right?

22 THE WITNESS: Yes.

23 HEARING OFFICER VALKOSKY: Okay. Now,
24 regarding three of Mr. Radis's transportation
25 mitigations, I'd like to do the same thing.

1 Subsurface ammonia storage tanks? These appear at
2 pages five and six, I believe, of Mr. Radis's
3 testimony.

4 THE WITNESS: Well, I agree that if you
5 were to make the tank subsurface it would reduce
6 the amount of, or the probability that anyone in
7 the community would be affected if there were a
8 release. I don't think that the probability that
9 there will be a release that could affect the
10 community, as I've said, is significant at all,
11 but it's just a matter of degrees. I mean, this
12 would prevent a release to the air most of the
13 time.

14 HEARING OFFICER VALKOSKY: Do you have
15 any idea of the cost associated with such a
16 measure?

17 THE WITNESS: I presume it's quite -- I
18 mean, I don't know the dollar value, but it would
19 cost more than not burying it.

20 HEARING OFFICER VALKOSKY: Right, right.

21 MR. CARROLL: Mr. Valkosky, could I
22 request a clarification? Are you asking Mr. Lague
23 to opine as to whether or not these measures would
24 result in a risk reduction, or are you asking him
25 to indicate whether or not these measures are

1 acceptable to Mirant?

2 HEARING OFFICER VALKOSKY: I'm asking
3 him whether they would result in a risk reduction
4 and his opinion as to whether the application on
5 the project, in his opinion, is either infeasible
6 or just unnecessary, in view of the level of risk
7 associated with the proposal.

8 MR. CARROLL: Okay. The reason I ask is
9 I think he's qualified to opine as to whether or
10 not they would reduce the risk. As to whether or
11 not these measures, particularly now that we're
12 talking about project design measures, are
13 feasible, he's not a project design witness.

14 And so we may have to wait until Ms.
15 Zambito, or somebody who would be able to
16 understand how these changes would affect the
17 overall project design.

18 HEARING OFFICER VALKOSKY: And that's
19 understood. And at least this way you'll have at
20 least some limited benefit from the questions.
21 But again, with the qualifications.

22 The double-walled tank?

23 THE WITNESS: The double-walled tanks
24 would reduce the risk -- It would be my
25 understanding from the way CEC usually handles

1 that, that it would mean that the worst-case
2 release no longer is a release from the large
3 storage tank, but something else.

4 HEARING OFFICER VALKOSKY: Okay. So by
5 that did you mean that it would lower the volume
6 of liquid that would be released in a worst-case
7 scenario?

8 THE WITNESS: It would lower the volume
9 of liquid, but if, for example, in our case we
10 have both the -- probably the second biggest
11 release, if we eliminate the storage tank release,
12 would be a tanker truck while it's unloading. So
13 let's say that's the second biggest.

14 If it flows -- If the ammonia from that
15 release flows to the same sump that the other --
16 that the ruptured storage tank would flow to and
17 the calculation of the emission rate is pretty
18 much governed by the area of that surface, it
19 wouldn't change the result very much.

20 Okay. So then is it fair to say that
21 you don't believe the use of a double-walled tank
22 is necessary at the project?

23 THE WITNESS: Yeah, I mean, I don't
24 believe it's necessary.

25 HEARING OFFICER VALKOSKY: Okay. How

1 about, last, a water suppression system?

2 THE WITNESS: Well, the same thing. I
3 mean, it's another mechanical device that will
4 have to be kept and maintained. It would knock
5 down the ammonia in the event of a spill, but the
6 event, the probability, in my opinion, that this
7 spill would happen is very low.

8 And the modeling that was done and the
9 risk analysis that has been done showed that if it
10 did happen, the concentrations to the fence line
11 are not concentrations that are associated with
12 harm, although, you know, except for those effects
13 that I listed a while ago.

14 So I don't see the need for it.

15 HEARING OFFICER VALKOSKY: Okay. But
16 you would say that it is feasible to use it?

17 THE WITNESS: It is.

18 HEARING OFFICER VALKOSKY: Okay. Are
19 you familiar with the City and County's
20 modifications to the proposed conditions of
21 certification contained in I believe it's the
22 testimonies of Ms. Cone and Mr. Radis?

23 THE WITNESS: Yes.

24 HEARING OFFICER VALKOSKY: Would you
25 comment upon the acceptability to the applicant of

1 the proposed changes to the various conditions?

2 THE WITNESS: I don't believe I should
3 comment as to the acceptability to the applicant.

4 HEARING OFFICER VALKOSKY: You're not
5 prepared to speak as to the acceptability to the
6 applicant?

7 THE WITNESS: No.

8 HEARING OFFICER VALKOSKY: Okay. Do you
9 know who is?

10 Mr. Carroll?

11 MR. CARROLL: I believe some combination
12 of Mr. Harrer and/or Ms. Zambito, who we will
13 bring back at project design, would be in a
14 position to indicate whether or not these
15 additional measures would be acceptable.

16 We don't mean to be evasive here, but
17 Mr. Lague was asked to analyze the risks
18 associated with the project as designed. So he
19 was given a project as designed, and he's neither
20 qualified nor given the authorization to sort of
21 commit to changes in the design on the fly, so
22 that's the problem --

23 HEARING OFFICER VALKOSKY: Okay. No,
24 and that's fair, and also realize what the
25 committee has to do is that you've got various

1 proposals, ways to mitigate a certain thing.
2 You've got various language in the conditions.
3 The committee is interested in getting the
4 perspective of all the interested parties on those
5 changes before it makes its decision.

6 MR. CARROLL: Absolutely.

7 HEARING OFFICER VALKOSKY: So that's
8 still what I'm looking for.

9 Mr. Lague, do you agree that the use of
10 a urea pellet system would eliminate or at least
11 substantially reduce any risks associated with the
12 transportation and/or storage of aqueous ammonia?

13 THE WITNESS: Yes, it would reduce the
14 risk for transportation basically to zero. And
15 depending on whether or not the design engineers
16 were confident enough that it could respond as
17 required to control NOx, which is -- there will
18 undoubtedly be conditions on this project to never
19 exceed certain short-term emission limits of NOx.

20 To the extent that it can do that, it
21 removes the need to have aqueous ammonia there.
22 If it cannot be reliably counted on to do that,
23 which I think you've already heard testimony about
24 that, but then you would probably still have to
25 have it there as a backup, or else face the risk

1 of having to shut down every time -- or be in
2 violation of the --

3 HEARING OFFICER VALKOSKY: When you say
4 yet, you mean you still have to have aqueous
5 ammonia as a backup?

6 THE WITNESS: Yes, in my --

7 HEARING OFFICER VALKOSKY: Okay.

8 THE WITNESS: I mean, if you weren't
9 confident that it would work and do its job all
10 the time, yes.

11 HEARING OFFICER VALKOSKY: Are you
12 familiar with any of the specific reasons the
13 applicant has not elected to use the urea system
14 for the project?

15 THE WITNESS: Yes.

16 HEARING OFFICER VALKOSKY: Could you
17 specify those for me, please.

18 THE WITNESS: Well, what I understand is
19 that their concern is for a merchant combined-
20 cycle plant, there is concern that that system may
21 have trouble tracking rapid load changes, which
22 are one of the desirable -- rapid load changes are
23 one of the desirable features of combined-cycle
24 gas-fired projects. And that could compromise the
25 advantage of those kinds of systems if the ammonia

1 production -- it is in real time, if it couldn't
2 keep up.

3 That's my understanding of the arguments
4 that have made them reluctant to use that system.

5 HEARING OFFICER VALKOSKY: So do you
6 know whether these, I'm going to term them
7 operational considerations, would be relieved by
8 the use of a urea system with a backup aqueous
9 system?

10 THE WITNESS: I know that that's been
11 what Mirant did on a project back in
12 Massachusetts. They weren't sure. And so far, I
13 guess they haven't got enough operational,
14 according to Ms. Zambito's testimony, I don't
15 think they've gotten enough experience working
16 with it to feel confident about it.

17 HEARING OFFICER VALKOSKY: Okay. How
18 big was that project, do you have any idea?

19 THE WITNESS: I used to know, but I
20 don't remember.

21 HEARING OFFICER VALKOSKY: Okay.

22 COMMISSIONER KEESE: Just two quick
23 questions. As the project is now proposed, where
24 are the tanks to be located?

25 THE WITNESS: There is a picture that

1 shows that in the AFC, I think it's figure 8.12-2
2 or it's --

3 MR. CARROLL: We could assume everybody
4 still has Exhibit 46, which is the aerial shot,
5 somewhere within reach. Why don't we use that as
6 a reference point.

7 Does everybody have Exhibit 46 in front
8 of them?

9 THE WITNESS: In that exhibit there is a
10 little, just below the right-most storage tank,
11 there is a paved area going down from there. And
12 there is a --

13 COMMISSIONER KEESE: I'm sorry, let me
14 interrupt. From which storage tank, tank number
15 three?

16 MR. CARROLL: Let me suggest that we use
17 a point of orientation, the orange outline on this
18 diagram.

19 COMMISSIONER KEESE: Okay.

20 MR. CARROLL: So why don't you start,
21 Mr. Lague, if you would, sort of at the lower
22 right-hand corner of the orange outline.

23 THE WITNESS: Okay. Does everybody see
24 where the orange outline is?

25 COMMISSIONER KEESE: Yes.

1 THE WITNESS: Then going -- If you're
2 holding this figure so that you're going up to the
3 north, then it's right in the area where that
4 building is, just before you get off what looks
5 like an unpaved or at least a tanner-looking area
6 along, near the right side of that orange area.

7 COMMISSIONER KEESE: So to the west of
8 Unit Three?

9 MR. CARROLL: Correct.

10 COMMISSIONER KEESE: In that area
11 between the orange area and Unit Three?

12 MR. CARROLL: That's correct.
13 Mr. Lague, is the proposed location -- again,
14 starting at the lower right-hand corner of the
15 orange outline and moving up or north along almost
16 the edge of the yard there, at some point that
17 line, just before it reaches the end of the yard
18 crosses through a building, and is that the
19 proposed location of the ammonia storage tanks,
20 approximately?

21 THE WITNESS: Yes.

22 MR. CARROLL: Okay. So it's almost at
23 the northeastern corner of that yard; is that
24 correct?

25 THE WITNESS: Yes.

1 COMMISSIONER KEESE: Okay. And the
2 fence line, when you did your analysis
3 concentrations at the fence line, which fence
4 line?

5 THE WITNESS: The closest one, which
6 is --

7 COMMISSIONER KEESE: The closest fence
8 line.

9 THE WITNESS: -- the south fence line,
10 which is about 250 feet away.

11 COMMISSIONER KEESE: Okay. Thank you,
12 Mr. Lague.

13 COMMISSIONER PERNELL: The tank is
14 obviously above ground.

15 THE WITNESS: Yes.

16 COMMISSIONER PERNELL: Single-walled.

17 THE WITNESS: Single-walled.

18 COMMISSIONER PERNELL: What is it made
19 out of? What is the material that the tank is
20 made out of?

21 THE WITNESS: I believe it's steel, but
22 I don't remember. It has to meet the American
23 Society of Mechanical Engineers standards, but I
24 don't -- I believe it's steel.

25 COMMISSIONER PERNELL: So basically what

1 you're using is an existing tank; this is not a
2 new tank?

3 THE WITNESS: Oh, it's a new tank.

4 COMMISSIONER PERNELL: Is it there
5 already?

6 THE WITNESS: No. I should clarify,
7 there will be two tanks, one to support the
8 operation of Unit Seven, and another one for a
9 retrofit of an SCR that is planned and required on
10 Unit Three. But neither one is there now.

11 COMMISSIONER PERNELL: But it's being
12 represented on this diagram. Did you --

13 Mr. Carroll, maybe I should take this
14 up --

15 MR. CARROLL: I'm sorry --

16 COMMISSIONER PERNELL: Can you put a
17 mark on the --

18 MR. CARROLL: Sorry, I indicated a mark
19 at the location that I previously described, it's
20 the proposed location of the new ammonia storage
21 facility. Now, there are some existing it looked
22 like trailers or trucks sitting there at the time
23 that that photograph was taken, but I'm sorry if I
24 confused things by putting that mark there.
25 That's a proposed location.

1 COMMISSIONER PERNELL: Okay.

2 MR. CARROLL: Perhaps a better way of
3 doing this in the aerial photograph, if you have
4 section 8.12, which is the hazardous materials
5 section of the AFC in front of you and the figure
6 8.12-1, which is part of the exhibit and sponsored
7 by Mr. Lague, it is a plot plan of the facility
8 with the ammonia unloading and storage facility
9 clearly identified.

10 MS. MINOR: I'm sorry, what is that page
11 again?

12 MR. CARROLL: Well, it's figure 8.12-1.

13 MR. ROSTOV: It's at the back. All the
14 figures and tables are at the back.

15 COMMISSIONER PERNELL: Can we go off the
16 record a minute, please.

17 (Brief recess.)

18 COMMISSIONER PERNELL: And you're saying
19 this tank is made out of steel? Is that what you
20 said?

21 THE WITNESS: That's my recollection.

22 COMMISSIONER PERNELL: And it has a --
23 And you may have said this before, but I'm a
24 little bit more focused on this. It has a sump to
25 catch any spillage?

1 THE WITNESS: Yes. The design that's
2 proposed has a primary containment area that's a
3 cement pad with a wall around it, and there are
4 two tanks that are horizontal tanks sitting on
5 cradles inside that area.

6 Under each of the tanks is a 42-inch-
7 diameter hole that, in the event of a spill, the
8 hole is sized so that the entire contents of one
9 of those tanks could flow through that hole and
10 get down underneath the -- into that sump, below
11 ground, in about one minute. And so that is the
12 design.

13 COMMISSIONER PERNELL: So if it's
14 seeping from -- How tall is the wall around the
15 tank?

16 THE WITNESS: I don't remember, but I do
17 know it's tall enough to hold the contents of both
18 tanks.

19 COMMISSIONER PERNELL: I guess where I'm
20 going with this is if the tank happened to be, if
21 there is a leak -- well, it wouldn't be
22 spillage -- if something happened to damage the
23 tank from the top, would the liquid spill over the
24 wall or will it still drain down?

25 THE WITNESS: No, it will still be

1 enclosed in the primary containment area, which is
2 slanted toward these holes to make it go below
3 ground. It can't -- The outer wall of that
4 primary containment area is outside the location
5 of the tanks.

6 COMMISSIONER PERNELL: No, I understand
7 that. I think what I'm -- Can I direct you to
8 Exhibit 46, where you have tanks and then you have
9 a containment wall around it. I don't mean to
10 make this complicated, but I'm just trying to get
11 a better understanding of it.

12 THE WITNESS: Sure.

13 MR. CARROLL: I'm afraid what I gave you
14 is our Exhibit 46.

15 COMMISSIONER PERNELL: I'm sorry, that's
16 okay.

17 All right. If you look at the three
18 larger tanks there, tank number three where the
19 red diagram is going over --

20 THE WITNESS: Right.

21 COMMISSIONER PERNELL: -- and I know
22 that this is not exact, but is that a seminal
23 representation of what you're talking about, in
24 terms of a wall around the tank?

25 THE WITNESS: Yes. The idea is a wall

1 to keep a spill from the vessel inside the wall
2 from migrating away, yes.

3 COMMISSIONER PERNELL: And if someone
4 were to pierce the top of that tank, would the
5 contents spill over the wall?

6 THE WITNESS: I guess it depends on how
7 full the tank was, but I don't think so.

8 MR. CARROLL: A point of clarification:
9 Are you referring to tank number three or are you
10 referring to the proposed ammonia storage tanks?

11 COMMISSIONER PERNELL: Well, I'm
12 referring to the proposed STRS tank, but I'm just
13 using this as an example to give me some
14 visualness of where I'm going with this.

15 MR. CARROLL: With that clarification
16 can you answer the question, whether or not there
17 is a scenario under which the contents of the tank
18 could spill over the containment wall?

19 THE WITNESS: I do not believe they
20 could spill over the containment wall. This
21 liquid is not under pressure. It's water with 29
22 percent ammonia in it. It is in a horizontal
23 bullet-shaped tank, and it is surrounded by a
24 wall.

25 So if you were to puncture the top of

1 that tank, I guess if it was, if that happened
2 when the tank was completely full, some of it
3 might leak out and go into the containment area
4 below, but I can't see any mechanism that would
5 make that ammonia jump outside the containment
6 area, no.

7 COMMISSIONER PERNELL: So the tank is
8 not under any kind of pressure, it's just -- I
9 mean, if you fill it, it's like filling a
10 container with water.

11 THE WITNESS: Yes.

12 COMMISSIONER PERNELL: Okay.

13 HEARING OFFICER VALKOSKY:

14 Mr. Westerfield?

15 MR. WESTERFIELD: Mr. Lague, I'm Bill
16 Westerfield for the staff.

17 THE WITNESS: Good afternoon.

18 MR. WESTERFIELD: I just have a few
19 questions for you. I won't take but a few
20 minutes.

21 CROSS-EXAMINATION

22 BY MR. WESTERFIELD:

23 Q Could you pull out your testimony, page
24 three, and when you're there you could take a look
25 at line 14, lines 14 and 15. And there you

1 mentioned that you had clarified that hazardous
2 waste generated during construction would be
3 collected and moved daily to the contractor's
4 90-day hazardous waste storage area on site.

5 First off, what kind of hazardous waste
6 is expected to be generated during construction?

7 A Well, not very much. Basically, if any
8 spills occur while fueling the construction
9 equipment or any types of coatings that you might
10 use on various surfaces of the buildings that are
11 being built or the equipment that's being built,
12 those are pretty much the main ones.

13 Q Okay. And fuels we understand. What
14 kind of coatings are you, do you have in mind?

15 A I'm not really sure. I considered this
16 would be a matter of an occasional can of a
17 coating, and after it's used that they would take
18 the containers of that and put it in a storage
19 box. And then every 90 days it would be taken
20 outside to where it's supposed to go.

21 Q Okay. That's fine. And then could you
22 take a look at page four, lines two to four, where
23 you said you explained that earthquake ground
24 motions used for design typically have a
25 90-percent chance of not being exceeded in 50

1 years, which corresponds to a typical return
2 period of 475 years.

3 I'm sorry, I have to confess, I don't
4 understand what that means: "a typical return
5 period of 475 years."

6 A Well, I had some help on this from some
7 seismic experts. As I said, I'm managing director
8 of the preparation of the answers to the questions
9 relating to hazardous materials, but it's my
10 understanding that that's the same thing as a
11 frequency, an expected frequency of return, once
12 in 475 years.

13 Q Okay. So what kind of -- frequency of
14 what event are we talking about happening?

15 MR. CARROLL: May I make the suggestion
16 that we move to the response to the data request
17 itself, which expands upon the answer?

18 MR. WESTERFIELD: Absolutely. Where is
19 that?

20 MR. CARROLL: It's data request, I'm
21 sorry, response to data request 112, Southeast
22 Alliance for Environmental Justice.

23 MR. WESTERFIELD: All right. I'm not
24 sure I'm going to be able to put my hands on it.
25 No, we don't have it.

1 MR. CARROLL: If we could have just a
2 moment to let the witness read the full response,
3 I think that would be helpful.

4 MR. WESTERFIELD: Sure.

5 THE WITNESS: Well, this data request
6 was attempting to state that the facility would be
7 designed for a ground motion that would not
8 have -- that would have a 90-percent chance of not
9 being exceeded over a 50-year period, which I
10 guess the statistics work out that the return
11 period or the expected frequency associated with
12 such an event that would exceed that would be one
13 in 475 years.

14 BY MR. WESTERFIELD:

15 Q Okay, and so what is the -- The
16 magnitude that is being assumed here is 7.8 to 8?

17 A Yes.

18 Q Okay. So you're talking about design
19 for what equipment or what thing are you designing
20 against?

21 A I'm sorry, are you --

22 Q Are you talking about a piece of
23 machinery you're designing against this earthquake
24 happening?

25 A No, it's the hazardous materials

1 containment structures that are -- including
2 aqueous ammonia containment system that are --
3 will be on the site.

4 Q Okay. So you're saying that you're
5 designing against a 7.8 Richter scale event in the
6 ammonia containment tank.

7 A And actually, they're talking about the
8 containment facilities around the tank.

9 Q Okay, around the tank, not the tank
10 itself?

11 A Mm-hmm.

12 Q So say you had a 7.8 magnitude
13 earthquake, and the tank would rupture, fall down,
14 something like that, this containment structure
15 around the tank would still contain all of the
16 liquid in the tanks?

17 A It has been designed to --

18 Q To do that.

19 A -- to do that, yes.

20 Q Okay, all right.

21 A Well, it will be designed. The final
22 design is still to come. This response is really
23 by way of showing you the types of considerations
24 that need to be taken into account in designing
25 these.

1 Q Absolutely, okay. Now I'm clear on
2 exactly what that means.

3 And I'm going to ask you another
4 earthquake question. After the next semicolon you
5 say you explained that the final plant design will
6 be based on probablistic calculations drawn from
7 models that describe the regional fault system and
8 take into account the storage sizenicity as well
9 as the decreasing seismic energy from the source
10 faults to the site.

11 And in that last phrase, "as well as the
12 decreasing seismic energy from the source faults
13 to the site," what is meant by that?

14 A I'm afraid I'm not the right guy to
15 answer that, I'm sorry.

16 Q Okay.

17 MR. WESTERFIELD: And who would be,
18 Mike?

19 MR. CARROLL: Excuse me just a moment,
20 let me read the sentence.

21 MR. WESTERFIELD: Sure.

22 MR. CARROLL: And what is the question
23 again?

24 MR. WESTERFIELD: Well, first off, what
25 did that mean, and I think your witness says he's

1 not the person to answer that question, and so I'm
2 asking you who would be the person to respond to
3 that?

4 MR. CARROLL: And the question is simply
5 what do these last two sentences mean?

6 MR. WESTERFIELD: Yes, what does that
7 clause mean? I'm trying to probe what's meant by
8 that.

9 MR. CARROLL: Well, I think I'm
10 qualified to answer that question, it's plain
11 English. It says that the model takes into
12 account the impact associated with the earthquake
13 as well as the attenuation of the impact from the
14 source of the earthquake to the location of the
15 project site.

16 MR. WESTERFIELD: Shall we swear
17 Mr. Carroll?

18 HEARING OFFICER VALKOSKY:
19 Mr. Westerfield, as an attorney, I'm sure you've
20 taken your share of chances to testify in this
21 case.

22 (Laughter.)

23 MR. CARROLL: I don't mean to be
24 flippant about it. I guess I don't understand why
25 there is a question about the phrase. I mean, it

1 appears to be clear on its face to me.

2 COMMISSIONER PERNELL: Is that the
3 aftershock stuff?

4 MR. CARROLL: I think what it means, my
5 reading of it is that you have an 8.0 earthquake
6 right here; the effect of that earthquake over
7 here at the project site is going to be something
8 less than 8.0, and the model takes into
9 consideration the attenuation between the point of
10 the quake and the project site.

11 HEARING OFFICER VALKOSKY: Mr. Carroll,
12 I assume that seismic design criteria are
13 something that will be addressed in facility
14 design, correct?

15 MR. CARROLL: We can certainly make a
16 point of touching on that issue.

17 HEARING OFFICER VALKOSKY: I think
18 that's where we have it addressed.

19 MR. WESTERFIELD: Excellent solution.

20 And can we also assume that at that
21 point we can talk about Mirant's consideration,
22 actually at lines nine and ten, of special design
23 and construction measures including flexible
24 couplings and backflow valves in the final design,
25 things designed to accommodate for this threat,

1 these threats? Can we deal with them then?

2 MR. CARROLL: Explain to me where -- I'm
3 sorry, I lost track of where you are again.

4 MR. WESTERFIELD: Sure, at lines nine
5 and ten, just slightly farther down.

6 MR. CARROLL: In the prepared testimony?

7 MR. WESTERFIELD: In the prepared
8 testimony, yes. It says that Mirant is
9 considering doing some things --

10 MR. CARROLL: Yes. Where I would
11 suggest we take all of those project design issues
12 up would be under the topic of project design.

13 MR. WESTERFIELD: Great. That's just
14 fine, so no more questions. Thank you.

15 HEARING OFFICER VALKOSKY: Ms. Minor?

16 MS. MINOR: I actually don't have very
17 much, our hearing officer and Commissioner having
18 done such an effective job of asking my questions,
19 but just a few.

20 How are you today?

21 THE WITNESS: Fine, thank you.

22 MS. MINOR: Good.

23 CROSS-EXAMINATION

24 BY MS. MINOR:

25 Q Can you clarify whether Mirant's risk

1 analysis considered the impact of transportation
2 of aqueous ammonia for both Unit Three and Unit
3 Seven?

4 A Actually, the transportation analysis
5 only looked at the incremental amount of ammonia
6 that will be for Unit Seven.

7 Q And the on-site storage analysis, did
8 that consider storage for both Unit Three and Unit
9 Seven?

10 A In a way, it did, and if you would like,
11 I'll clarify what I mean by "in a way."

12 Q Would you, please.

13 A You usually have to explain "in a way."

14 Q Mm-hmm.

15 A We have assumed that the tanks for both
16 the storage tanks and the unloading facility would
17 be common to those two units, and so to the extent
18 that we've talked about what equipment will be out
19 there, we are assuming there will be two 20,000-
20 gallon ammonia tanks, and there will be an
21 unloading rack that is -- an unloading facility
22 that would work to load either of those two tanks.

23 It just works out, because they're both
24 connected to the same, or located right above the
25 same underground sump and the risk management

1 guidelines tell us that we have to look at a
2 release of the largest volume in any vessel, the
3 largest volume in any vessel would be one or the
4 other of those two tanks.

5 And so it doesn't much matter whether
6 you say there's two there or there's one as far as
7 what is the impact of one of the tanks spilling
8 into the sump.

9 Q Okay.

10 A And so, from that point of view, we
11 would get the same answer if we said this accounts
12 for both of the SCRs, but in the transportation we
13 only looked at it as we said.

14 Q Okay. And so, just to be clear and I
15 think the record needs to be clear about this, the
16 transportation risk analysis only considered
17 transportation of aqueous ammonia for Unit Seven
18 because that's the project that's pending.

19 A Yes.

20 Q Yes. But in terms of community impact
21 and cumulative impact, we actually have trucks
22 transporting ammonia for two 20-gallon tanks --
23 two 20,000-gallon tanks through both the route
24 from the ammonia facility to I-280, and from I-280
25 to the Potrero site.

1 A Yes.

2 Q Okay. Is it your professional opinion
3 that somehow the risk factors associated with
4 transportation of ammonia for Unit Three should
5 have been considered?

6 A Well, I mean, we were -- Yes, I suppose
7 it would have been all right. We explained in
8 numerous places in this document that because this
9 is about Unit Seven and the timing and so on of
10 when Unit Three would be retrofitted was unknown,
11 we would just focus on here. I mean, we made our
12 intentions on that clear, but if you wanted to
13 look at the combined risk, it would be basically
14 double what we said from the transportation. It
15 would be basically twice the number of trips.

16 Q Okay, thank you. You were asked earlier
17 about the conditions of certification proposed by
18 the City.

19 A Yes.

20 Q And there was testimony that you could
21 not speak to that. I'd like to focus you more
22 specifically on the proposed modifications to the
23 conditions of certification that are appended to
24 the testimony, first of City witness Sue Cone.

25 A Okay.

1 Q This is not a modification that goes to
2 design, and I would like to ask if you concur with
3 that proposed modification.

4 MR. WESTERFIELD: Which modification is
5 that?

6 MS. MINOR: It's Exhibit C, attached to
7 the testimony of Sue Cone.

8 MR. WESTERFIELD: Thank you.

9 THE WITNESS: Well, I concur that it's
10 going to get done that way, whether the Energy
11 Commission requires it or not, because that's the
12 agency from whom we would have to get the RMP --
13 who would have to approve our RMP. So I can't see
14 any down side of putting it in to CEC as well.

15 BY MS. MINOR:

16 Q Okay, great. And let me ask you the
17 same question as it relates to the conditions of
18 certification, the proposed modifications to the
19 conditions of certification that are appended to
20 Richard Lee's testimony, and it's Exhibit D. And
21 again, these do not go to design.

22 Do you have it handy?

23 A I know I did. Well, here, yes. I have
24 Richard Lee's testimony. Which --

25 Q Okay. It's Exhibit D, and there are two

1 modifications proposed to haz three conditions,
2 conditions of certification.

3 A In my opinion, those changes are not
4 unreasonable.

5 HEARING OFFICER VALKOSKY: Does that
6 equate with acceptable, or are you still not able
7 to talk for applicant's --

8 THE WITNESS: Oh, well, again, I can't
9 tell what Mirant thinks is acceptable, but I view
10 those as -- in the first paragraph, as an
11 inevitable event anyway. And in the second
12 paragraph, I think it's reasonable, if that's a
13 concern, to make sure that it addresses the
14 measures that will keep incompatible chemicals
15 from mixing.

16 MR. CARROLL: On behalf of the
17 applicant, I will accept those proposed changes to
18 the conditions of certification.

19 HEARING OFFICER VALKOSKY: Okay. Now,
20 Mr. Carroll, specify the conditions of
21 certification.

22 MR. CARROLL: Those that were just
23 described, appended to Mr. Lee's testimony, the
24 proposed changes to haz three.

25 HEARING OFFICER VALKOSKY: And how about

1 to Ms. Cone's testimony, proposed changes to haz
2 two?

3 MR. CARROLL: Yes. That as well.

4 HEARING OFFICER VALKOSKY: Okay.

5 MS. MINOR: Good. That was easy, thank
6 you.

7 BY MS. MINOR:

8 Q Do you have any professional experience
9 in assessing the impact of hazardous materials on
10 environmental justice populations?

11 A I've participated in the air quality
12 analysis that predicted impacts in various areas
13 around specific sources, which may have been used
14 by other people to -- in the context of
15 environmental justice, but I've never -- I don't
16 think I've ever written a word about environmental
17 justice.

18 Q Okay. Did you consider demographics,
19 the social economic demographics of the community
20 in which the power plant is located as you
21 assessed potential hazardous materials impacts?

22 A No, I did not. I calculated the risks
23 that I believed would -- I calculated the impacts
24 of the project as it was proposed, and my
25 conclusion was that the impacts at the fence line

1 were acceptable, which sort of makes it a moot
2 point of what population is surrounding the plant.

3 I predicted there wouldn't be an impact
4 on people, and so from that point of view, no, I
5 did not take it into account.

6 Q Okay. Do you know if anyone from Mirant
7 has considered the impact of hazardous materials
8 on the population within, the staff is looking at
9 a six-mile radius, let's say, for an example, a
10 six-mile radius of the power plant?

11 A There is a section that I don't believe
12 has come into the hearings yet about environmental
13 justice, but I don't really know what's in it.

14 Q Okay. If this project is approved,
15 there will be two 20,000-gallon tanks of aqueous
16 ammonia added to the Potrero site, and I
17 understand that equates to --

18 A Well, if this project is approved, there
19 will definitely be one. But if they go ahead and
20 do the retrofit of Unit Three, then there would
21 need to be two.

22 Q That's an important clarification, and
23 let me clarify my question. As a result of Unit
24 Seven and the proposed retrofit of Unit Three,
25 there would be two 20,000-gallon tanks of aqueous

1 ammonia on the site; is that correct?

2 A Yes.

3 Q Okay. Is any aqueous ammonia currently
4 used on the site?

5 A I believe a small amount is used in the
6 control of boiler water pH on Unit Three.

7 Q Okay. Do you know what amount that
8 would be?

9 A We listed the amount in -- I could look
10 it up. We have in section 8.12, the first table
11 at the back of it, or the second table at the back
12 of it we listed the amounts.

13 Well, it is not there, and I may have
14 confused this with another project I worked on. I
15 know that at Contra Costa they also had some
16 aqueous ammonia on site. I would have to -- I
17 could find out the answer, but I don't know the
18 answer.

19 Q So if aqueous ammonia is not on that
20 list, does that mean it's currently not being used
21 at the site?

22 A Well, it means that when I built this
23 table I didn't think it was being used, but I'm
24 just not sure.

25 Q Okay. If it is being used at the site,

1 it's your testimony it's being used in small
2 quantities?

3 A Yes.

4 Q Can you quantify that in any way, or --

5 A I guess I can't, no.

6 Q Okay.

7 A But in other plants, it's used in quite,
8 you know, in hundreds of gallons.

9 Q Okay. Does the Potrero site currently
10 have an RMP?

11 A No.

12 Q It does not.

13 A No.

14 Q Okay. So the Unit Seven project and the
15 proposed retrofitted Unit Three would introduce
16 approximately 148,000 pounds of aqueous ammonia
17 that currently do not exist on the site.

18 MR. CARROLL: I'm going to interject an
19 objection for the record. The assumption that
20 we're working under is that Unit Three will be
21 retrofit with SCR, and I'm willing to go with that
22 assumption for purposes of these hearings. But I
23 would also point out that no final decision has
24 been made with respect to that project, no permit
25 applications have been submitted with respect to

1 that project.

2 So, again, I'm okay with the
3 questioning, but I want to for the record indicate
4 that that is not what I would technically consider
5 a related project at this point, because there
6 have been no permits submitted for it. And it's
7 not absolutely positive that it will go forward,
8 although the assumption is that it will.

9 HEARING OFFICER VALKOSKY: What
10 permitting process will the Unit Three retrofit
11 follow?

12 MR. CARROLL: That would go through
13 primarily a local permitting process with, I would
14 assume, the Bay Area Air Quality Management
15 District taking the lead on the permitting, and
16 then obviously involvement with the City
17 Department of Health because of the on-site
18 storage of the ammonia.

19 HEARING OFFICER VALKOSKY: Okay. Thank
20 you for that clarification.

21 MS. MINOR: Okay.

22 BY MS. MINOR:

23 Q Would you like me to repeat the
24 question?

25 A Yes, thank you.

1 Q Okay. The proposed Unit Seven and the
2 proposed retrofit of Unit Three would introduce
3 onto the Potrero site two 20,000-gallon tanks of
4 aqueous ammonia, which I understand equate to
5 148,000 pounds of aqueous ammonia --

6 A That's about right.

7 Q -- which are currently not used on the
8 site.

9 A That is right.

10 Q Okay. The testimony indicates that the
11 Unit Seven project would result in the storage of
12 30,000 gallons of sodium hypochlorite.

13 A Yes.

14 Q What amount of sodium hypochlorite is
15 currently being used on the site?

16 A I have that there is currently storage
17 at the existing plant, just from the way it is
18 now, of about 2,000 gallons.

19 Q Two thousand gallons, okay. And I
20 believe this is out of the CEC testimony, and so
21 if you disagree with the numbers, please let me
22 know, that the proposed Unit Seven project will
23 result in the storage of 5,000 pounds of sulfuric
24 acid; is that correct? The reference I have is
25 that it's in the CEC staff testimony at page

1 5.5-8.

2 A Yes.

3 Q Okay. What amount of sulfuric acid is
4 currently used at the site?

5 A I'll go back to my table again.

6 Q Please.

7 A I don't have any listed.

8 Q Are you aware of any analysis that
9 considers the cumulative effect of the
10 introduction onto the Potrero site of these
11 quantities of these three separate chemicals?

12 A No.

13 Q Okay. When you prepared the hazardous
14 materials section of the application, the AFC,
15 were you aware that the Potrero site would become
16 the largest hazardous materials site in San
17 Francisco?

18 A No.

19 Q Okay. You've had an opportunity to see
20 the testimony of -- Have you seen the testimony of
21 Sue Cone?

22 A Yes.

23 Q Okay. And specifically I'm referring to
24 page two of her testimony, paragraph one on line
25 13, where she lists the five facilities in San

1 Francisco that require a risk management plan?

2 A Yes.

3 Q And that not taking into account the
4 proposed Potrero project, the largest quantity
5 that is stored of ammonia is 18,000 pounds, and
6 the proposal, when we take into account Unit
7 Seven, as well as the retrofit of Unit Three,
8 would be 148,000 pounds.

9 A Yes.

10 Q Okay. And your testimony is that you
11 did not consider the size of -- that the
12 cumulative effect of introducing a large quantity
13 of hazardous materials onto the site was not
14 considered?

15 MR. CARROLL: I'm going to object to
16 that. I don't recall any testimony to that
17 effect. I believe there was a response to a
18 question sometime ago as to whether or not
19 Mr. Lague knew at the time he conducted his
20 analysis that this would be the largest hazardous
21 materials storage facility in the city, to which
22 he responded no.

23 I believe also sometime ago he responded
24 to a question as to whether or not he had taken
25 into consideration -- whether or not he was aware

1 of an analysis that had been conducted of the
2 cumulative impacts of the ammonia that would be on
3 site and the sulfuric acid on site, and his
4 response to that question was no.

5 But I think that those two responses
6 were different from the one that was just
7 suggested.

8 HEARING OFFICER VALKOSKY: Okay. I'm
9 going to sustain the objection. Why don't you
10 rephrase the question.

11 MS. MINOR: Okay.

12 HEARING OFFICER VALKOSKY: Shorten it up
13 to a yes or no.

14 MS. MINOR: Yes. Actually, I think in
15 light of Mike's testimony, it's probably clear on
16 the record. Thank you.

17 MR. CARROLL: Every time counsel speaks
18 during a hearing, it does not constitute
19 testimony.

20 HEARING OFFICER VALKOSKY: All right.

21 (Laughter.)

22 COMMISSIONER PERNELL: You can't have it
23 both ways, counselor.

24 HEARING OFFICER VALKOSKY: From here on,
25 we'll swear in the attorneys first.

1 MS. MINOR: Uh-huh.

2 BY MS. MINOR:

3 Q Do you have an opinion as to whether the
4 impact of the introduction onto the Potrero site
5 of 148,000 pounds of aqueous ammonia, 30,000
6 pounds of sodium hypochlorite, and 5,000 pounds of
7 sulfuric acid should have been considered?

8 A Well, all of those things were
9 considered. I don't know what you mean by the
10 impact of those. We did evaluate the impact
11 through a mathematical modeling approach for the
12 aqueous ammonia, and we noted that the other
13 chemicals that will be there will be less than the
14 amounts that are required under federal and state
15 regulations to be included in an off-site
16 consequence analysis.

17 But, I mean, I don't really know in what
18 sense those -- having a tank of sulfuric acid in
19 one place and some tanks of ammonia in another
20 place constitutes a cumulative effect. I don't
21 know what that means.

22 Q Okay. I think those questions are
23 probably -- will get deferred to your
24 environmental justice witness when those issues
25 come up.

1 And just one last question. If we could
2 go back to the adverse health effects for ammonia
3 at 64 parts per million and I am looking at
4 Exhibit B, page 5.5-28 of the staff's testimony --

5 A Right.

6 Q -- and as I understand Exhibit B, within
7 seconds, it doesn't specify how many seconds, at
8 64 parts per million there is a list of adverse
9 health effects. In fact, the exhibit is called
10 Summary of Adverse Health Effects of Ammonia.

11 A I'm sorry, the summary, I don't know
12 where you mean the summary.

13 Q If you go to the first page of Appendix
14 B, it's entitled Summary of Adverse Health Effects
15 of Ammonia.

16 A Okay.

17 Q Do you see that? It's on page 5.5-27 of
18 the FSA.

19 A Yes.

20 Q Okay. I'd like to be clear as to how
21 you characterize those health effects. Are they
22 important, are they significant?

23 A Each one of these amounts?

24 Q Collectively.

25 A Collectively? They're significant if

1 you predict someone is going to breathe them.

2 Q Okay.

3 A I mean, the 266 parts per million is --

4 Q No, I'm specifically looking at 64 parts
5 per million, which is --

6 A Oh, I'm sorry --

7 Q -- what you were previously asked about.

8 A Sixty-four parts per million.

9 Q Uh-huh.

10 A Okay. I consider these to be -- This
11 was a standard or similar to a standard that is
12 designed for, as they say, the STPEL is the short-
13 term public emergency level, so it's a number
14 that's large enough to be of concern, but it's not
15 a level that will kill somebody or impair their
16 ability to get away. And you can see by the types
17 of effects that are here associated with 64 parts
18 per million that these would be unpleasant to some
19 people, and the question is whether you have to
20 design for a level that would be a little bit
21 unpleasant if the chances that they will actually
22 breathe that level are very, very small, and
23 that's a policy issue.

24 Q And if you were aware that, and let me
25 say hypothetically, if this area had a number, had

1 a higher percentage of sensitive receptors with
2 asthma, would that be a consideration as you look
3 at whether you'd want to design to 75 parts per
4 million or something lower than 75 parts per
5 million?

6 A I don't believe so, because the only
7 reason I'm predicting a number higher than 34
8 parts per million is in these rare cases, this one
9 percent of the time that the temperature would be
10 higher than 77 degrees, which means I need to
11 start correcting the emissions upward above that.

12 And the odds of this happening at 100
13 degrees or 90 degrees along the coast in San
14 Francisco is so low, in combination with all the
15 other assumptions that we made in predicting this
16 concentration that people would breathe, even up
17 to 68, that I just don't think it can happen.

18 So I don't think it would be necessary
19 to take into account that there are more sensitive
20 people, from the point of view that I don't think
21 anyone is going to breathe this level.

22 Q Because the -- And the basis for your
23 opinion is because there are relatively few hot
24 days, and you would have to look at both hot days
25 and the likelihood of a spill occurring on a hot

1 day?

2 A And, in order for this to be a concern,
3 a bunch of other things have to happen. It has to
4 be a hot day, it has to have extremely limited
5 dispersion -- That's what we modeled -- which
6 doesn't happen during hot days. It happens
7 during, more typically, early in the morning,
8 after a calm night, which that's the kinds of
9 times when you have very stable F stability, and
10 that's not the kinds of times when you have high
11 temperatures. But we assumed that they happened
12 at the same time.

13 You would also note that about 75
14 percent of the time, if you look at a wind rose
15 from the Potrero site, the wind is not even
16 blowing towards any people. It's blowing out over
17 the Bay. So the probability that a whole -- you
18 know, somehow, some incredible act of violence or
19 God or whatever causes 20,000 gallons to spill and
20 all those things are true, it seems to me adequate
21 protection of the public. That's my opinion.

22 Q Okay, thank you.

23 MS. MINOR: I have no further questions.

24 HEARING OFFICER VALKOSKY: Mr. Rostov?

25 MR. ROSTOV: Yes, I just have a few

1 questions.

2 COMMISSIONER PERNELL: I have one
3 question.

4 MR. ROSTOV: Oh, sure.

5 COMMISSIONER PERNELL: Have you prepared
6 or is there a risk management plan for the site?

7 THE WITNESS: No. We will be required
8 or Mirant will be required -- I shouldn't say we,
9 I don't know if I'll do it -- but it's going to be
10 required before at least aqueous ammonia can be
11 brought on the site. And we've been in contact
12 with the Health Department here regarding that
13 process, and they've told us that it needs to be
14 started in order to make sure all of due process
15 takes place within at least a year before you
16 intend to bring ammonia on the site.

17 So right now we're not there, but it
18 generally pays to wait and find out if you're
19 going to get to do the project before you do that.

20 COMMISSIONER PERNELL: That makes sense.
21 Thank you.

22 COMMISSIONER KEESE: Mr. Lague, you
23 analyzed dissipation, if this is the correct term,
24 dissipation rates of a spill from the fence line
25 and beyond, so if 64 ppm is what you estimate

1 would be, and from your analysis of the
2 concentrations at the fence line, what is the rate
3 of spread and dissipation of those concentrations
4 as you move away from that fence line?

5 THE WITNESS: Okay. There is a table at
6 the back of my testimony that hopefully answers
7 that question pretty well. The nearest public
8 receptor which we defined as being a park or a
9 recreational area called Warm Cove, which is about
10 500 feet away from the ammonia tank, so it's about
11 the same distance, again, that the ammonia tanks
12 are from the southern fence, beyond the fence, so
13 it's about 500 feet, the predicted concentration,
14 and this is assuming all those, maximum
15 temperature and all that --

16 COMMISSIONER KEESE: Excuse me, let me
17 interrupt, where? What table?

18 THE WITNESS: Oh, it's in Appendix B, I
19 think, in my testimony.

20 COMMISSIONER KEESE: Attachment B?

21 THE WITNESS: In my written testimony.

22 COMMISSIONER KEESE: Right.

23 THE WITNESS: No, I'm sorry, it's in
24 Attachment A to my testimony and it's table two.

25 And this table shows the progression as

1 you go further and further out of what the
2 predicted maximum short-term concentration would
3 be.

4 COMMISSIONER KEESE: Okay.

5 THE WITNESS: And the nearest public
6 receptor was 500 feet, the nearest commercial or
7 residential area which is up to the northwest, out
8 on Illinois Street, that we predicted to be about
9 1.7. And again, each one of these is the worst
10 thing we predicted could happen.

11 COMMISSIONER KEESE: Thank you.

12 HEARING OFFICER VALKOSKY: Mr. Rostov?

13 MR. ROSTOV: I just have a few
14 questions. Most of mine have been answered.

15 Good afternoon.

16 THE WITNESS: Good afternoon, sir.

17 CROSS-EXAMINATION

18 BY MR. ROSTOV:

19 Q First, assuming that there's -- Well, I
20 guess I have a question first. In your
21 containment facility, are both storage tanks
22 located in the same containment facility?

23 A Yes.

24 Q Okay. So assuming a catastrophic breach
25 of both tanks, how does that affect your fence

1 line concentrations?

2 A That would make them go up. There
3 would -- Because there is almost -- Well, let me
4 be careful about that, because if it somehow
5 happened that this catastrophe happened when both
6 tanks were completely full, which most of the time
7 they're not going to be because you've been using
8 ammonia right up until that minute, so when this
9 happens, there is not quite enough -- I think it's
10 90-percent containment for the two tanks to go
11 down in -- there's enough volume in the primary
12 above-ground containment to hold the full contents
13 of both of those tanks, but there is not quite
14 enough volume in the sump underground to hold -- I
15 think if I remember right, there is enough to hold
16 all of one and 91 or -2 percent of the other one,
17 plus some 24-hour worst-case rainfall.

18 And so if that were the case, if it were
19 to happen, and again, I mean, what's the chance
20 that it would happen, if both tanks were
21 completely full, the sump would be full and there
22 would be some left. So now we would be, we're
23 talking about an area that's spread out over this
24 above-ground containment, and for a little while
25 that could act as a source of ammonia. But the

1 odds of that happening seem to me to be extremely
2 small.

3 Q So would that double your concentrations
4 at the fence line, or --

5 A Well, it would be -- I think it would
6 more than double them. I didn't model that case,
7 because I just didn't think it could happen.

8 Q So what would the health impacts be if
9 something like that did happen? Would there be
10 any permanent ones, or -- So it would be doubling
11 your concentration of 68, more than doubling it,
12 according to your testimony, right?

13 A It would more than do that. But that's
14 just at the nearest fence line, not necessarily
15 where there is any person.

16 Q Okay. I'm just going to move on. On
17 page seven of your testimony, lines 17 through 19,
18 you say that the ammonia usage rate for continuous
19 full-load operation would be 525.6 tons a year.
20 What do you mean by "full-load operation"?

21 A Okay. What that means is that Unit
22 Seven has two combined-cycle gas turbines that are
23 capable of -- I forget, but it's something on the
24 order of 500 megawatts, and that means that -- and
25 the higher the load or the closer you're coming to

1 actually generating 500 megawatts, the more
2 emissions you would have, and so you would have
3 to -- because, don't forget, this ammonia, what
4 it's there for is to be an emission control.

5 So if you're going to have flue gas,
6 you're going to have to have more, you're going to
7 have more NOx emissions, so you have to use more
8 ammonia. So what I was saying here, continuous
9 full-time operation for a whole year, I'm assuming
10 something that will never happen, that both of
11 those two turbines will be running as hard as they
12 can be run. And enough ammonia will be used to
13 control them to the level they have to be
14 controlled.

15 Q So the full-load operational would be
16 the 540 megawatts operation?

17 A Yes.

18 Q Okay. So that doesn't include the use
19 of duct burners, which -- and power augmentation,
20 which increases the load up to 615 megawatts?

21 A Let's see --

22 (Brief recess.)

23 THE WITNESS: I can look in the response
24 we were talking about, which was -- Was that the
25 Potrero?

1 COMMISSIONER PERNELL: That's a good
2 question. Could we go off the record on that
3 until we --

4 (Brief recess.)

5 THE WITNESS: It doesn't say in the data
6 request. When I wrote it, I should have said
7 whether it does or not, but every other analysis
8 we've done has usually assumed the worst case, and
9 so I believe I meant that that includes the duct
10 burning, but if need be I can find out and let you
11 know.

12 COMMISSIONER PERNELL: Yeah. That is
13 something the committee would want to know as
14 well.

15 MR. CARROLL: We can certainly find that
16 out. I would point out that since publication of
17 all this information, we have submitted an
18 amendment to the AFC to significantly reduce the
19 hours of operation. So we will find out that
20 information, but I suspect that whether this
21 included duct-firing or not, with the recent
22 amendment to the AFC it's going to be a much lower
23 number than what was assumed here, but we'll find
24 out.

25 HEARING OFFICER VALKOSKY: And my

1 question at this level of the witness is that if I
2 were to tell you that operation of each of the gas
3 turbines at Potrero will be reduced from a maximum
4 of 8760 hours per year, which is 100 percent of
5 the year, to a maximum of 7446 hours or 85 percent
6 of the year, and that the annual hours of
7 operation of each of the duct burners will be
8 reduced from a maximum of a little over 7,000
9 hours a year to a maximum of 2200 hours a year,
10 would that in your estimation result in the use of
11 less ammonia?

12 THE WITNESS: Well, it certainly would
13 result -- just comparing those two cases, yes, it
14 would certainly use less ammonia in the latter
15 case, yes.

16 HEARING OFFICER VALKOSKY: Okay. Under
17 the lower numbers, and that which is reflected in
18 your testimony.

19 THE WITNESS: Yes.

20 HEARING OFFICER VALKOSKY: So that that
21 number -- What was it, 500 -- 525, would actually
22 be lower under the operating scenario that I've
23 sketched out?

24 THE WITNESS: I think it's very likely
25 it is. The question is whether, when I was

1 assuming full-load operation, whether I had the
2 duct burners on or not. So I don't want to say it
3 would be lower than this until I check, but I
4 think it would be.

5 HEARING OFFICER VALKOSKY: Okay, and we
6 will get that answer, so thank you.

7 I'm sorry, Mr. Rostov.

8 MR. ROSTOV: That's fine.

9 BY MR. ROSTOV:

10 Q My next question was the rest have
11 actual uses but to only be 340, 350 tons per year,
12 so this -- what was that based on? Was that based
13 on the recent reductions or was that based on a
14 previous number?

15 A That was based on not the recent
16 reductions that they've committed to. They
17 were -- At the time we wrote these, there was -- I
18 don't remember, but I remember they said we would,
19 the Mirant people told me they would not, in
20 actuality, run all the time. We showed the
21 emissions as if we were, but then we just
22 parenthetically said that there could be a reduced
23 load, about 20 percent due to down time and
24 operating at below maximum load.

25 And so we showed those numbers as well.

1 Q Okay. So is this the same as a 20
2 percent?

3 A I think it's about that, yes.

4 Q Okay.

5 A But, you know, since we wrote these data
6 responses, Mirant has again changed what they're
7 applying for.

8 Q Okay. I have one more question about
9 the first topic also. Assuming somebody was
10 standing at the fence line and there was a
11 catastrophic event where the concentrations at the
12 fence line more than doubled, what would the
13 health effects be on that person at the fence
14 line?

15 A Well, it's hypothetical. I haven't
16 calculated what the concentration would be in that
17 case. I think the question is whether it would be
18 high enough to impair the guy from getting out of
19 there, but I don't know. We haven't modeled that
20 case.

21 Q But it intentionally could be that high?

22 A If the catastrophic event came along and
23 broke both of the tanks to the extent that the
24 entire contents of both of them flowed into the
25 sump or tried to, and there would be a little left

1 that couldn't, you would get a higher number. And
2 I'd consider that -- You would think that the type
3 of event that would elicit that response would be
4 such that, you know, the headline in tomorrow's
5 paper would not be ammonia spill, you know, it
6 would be something bigger, a bigger picture --
7 desolation -- than that.

8 Q Major earthquake, for example?

9 A Well, no. They've designed for the
10 earthquake that they anticipate could happen
11 there.

12 Q I'm going to move on to a different
13 topic. On page six of your testimony, on line
14 three, you say that in response to data request
15 170 you explain that the liner has been omitted
16 from the design plans for the secondary aqueous
17 ammonia containment structure. So essentially
18 that means underneath the sump there is no liner;
19 is that correct?

20 A Yes.

21 Q Why did they omit the liner?

22 A The design engineers didn't think it
23 would be necessary. But again, this sump is only
24 there for a very improbable event in the first
25 place.

1 The status most of the time, until and
2 unless a condition came along that caused a large
3 or any ammonia to be spilled from one of these
4 tanks, the sump was empty. And it's even kept
5 empty of stormwater by a sump pump that keeps that
6 out of there, unless there is an indication that
7 there is ammonia in the water because there are
8 sensors there to tell.

9 So there's nothing to leak, most of the
10 time.

11 Q Would a liner -- When there were leaks,
12 would a liner be an added protection to preventing
13 the spread of an ammonia spill?

14 A I mean, it's a concrete sump, so I guess
15 if there was a big spill into the sump and the
16 sump also was in some way compromised, in terms of
17 a crack or something like that, then I suppose
18 some could get into the ground.

19 Q Okay. Also on page seven, at the
20 bottom, line 26, you say it's highly unlikely that
21 ammonia will enter the city sewer system?

22 A Yes.

23 Q Could you explain that a little.

24 A Well, just because the ammonia is
25 confined to either during an unloading event or

1 during storage, it's required -- if it's built, it
2 would be captured by the containment sump, which
3 is a concrete structure, and then it would go to
4 an underground secondary containment structure.

5 And then the procedure from then on
6 would be if there is enough there in combination,
7 let's say, the worst case it was already raining
8 or something, that water would be pumped to a
9 separate tank to be adjusted and put pH before it
10 went to the wastewater treatment plant. And if it
11 was just a large spill of ammonia, it would be
12 pumped to a storage tank, and probably the vendor
13 who delivers the ammonia would come pump it back
14 in and use it.

15 But there's -- I don't see any other
16 scenario there.

17 Q Could you explain where the trucks
18 unload? They don't go into the containment
19 facility.

20 A No.

21 Q Okay, so where do they unload?

22 A Right next to it. There is a little pad
23 that they would -- There is a picture in section
24 8.12 of the AFC that sort of shows it. And you
25 have to keep in mind, how this is going to be laid

1 out with respect to north and dimensions and that
2 kind of thing could change, but the containment
3 pad is going to be adjacent to it. There is no
4 reason -- in other ones Mirant built it's just a
5 few feet away, but it's outside the containment
6 and it has its own concrete pad that slopes to a
7 drain hole, in case ammonia were spilled at the
8 truck and it flows to the same sump underground.

9 There is a picture, it's figure 8.12-2
10 that kind of shows schematically what the concept
11 in this design in.

12 Q Okay. Where the trucks is unloading,
13 there is no wall around it or anything, there's
14 no -- you have to drive the truck onto a pad and
15 then the truck unloads onto a pad near these
16 storage tanks that are surrounded by a wall; is
17 that correct?

18 A I don't know that the design has been
19 developed to the point where it's been determined
20 whether there will be a little lip around that to
21 contain the spill in addition to having it flow
22 down through the sump hole. On other plants,
23 Mirant has done that, had a little wall around it
24 that's high enough to keep the whole contents of
25 it from going anywhere.

1 Q So right now you don't think the design
2 has that?

3 A I don't know. We didn't get that far
4 with the design. Well, yes, the design will
5 contain the contents of the truck and will funnel
6 it to the underground sump.

7 Q Okay. Could you explain how a truck is,
8 the ammonia is off-loaded from the truck? Is it
9 from the back, from the middle?

10 A There is a hose that comes -- Well, I
11 guess it can be, there are a number of places on
12 this truck where they can shut off the flow. But
13 I don't really know where the hose comes off, as
14 far as whether it's in the front or the back.

15 Q I guess my question was if it's in the
16 back, one can conceivably think of a situation
17 where somebody didn't drive totally onto the pad,
18 they hooked up the hose, and there was spillage
19 through the unloading process. In that case, have
20 you modeled a situation like that?

21 A No.

22 Q Is it conceivable that ammonia is
23 expelled to the city sewer in that case? I mean,
24 have you looked at the drainage around the sump
25 hat?

1 MR. CARROLL: I'm sorry --

2 MR. ROSTOV: Has he examined the roots
3 of drainage that's not right next to the sump pad?

4 THE WITNESS: The design is going to be,
5 to contain ammonia. I mean, I guess it could get
6 into the city sewer system in some way if the guy
7 didn't put the truck where he's supposed to put
8 it, but that's what they do for a living, deliver
9 ammonia. So I think that's a very low
10 probability.

11 (Brief recess.)

12 BY MR. ROSTOV:

13 Q Did you model the possibility of spill
14 from unloading?

15 A Yes, we did. It's in the AFC.

16 Q And you only did it in an ideal
17 condition where they're right above the sump?

18 A Yes.

19 Q Okay. Did you evaluate a process line
20 failure, like what if the hose sprung a leak or
21 something like that?

22 A I have in other cases looked at that.
23 The amounts of ammonia that are being delivered to
24 the SCR system up at the turbines are very small.
25 They're a couple gallons per hour, or gallons

1 going up to the SCR where it's going to get
2 atomized and injected into the SCR system.

3 In every case that we've looked at,
4 those, and there are provisions made to control or
5 to stop the flow of ammonia through those pipes as
6 soon as the pressure changes so that there is
7 obviously a break, it stops, and so you're just
8 talking about, you know, a very few gallons, less
9 than ten gallons, something like that spilling,
10 and someone would have to come clean that up right
11 away.

12 Q Okay. So there is a possibility that
13 there could be spills through the piping into the
14 SCR system; is that what you're saying?

15 A Yes.

16 Q Okay.

17 A I mean, we were --

18 Q And you didn't model --

19 A No, we modeled something much worse than
20 that, so that's --

21 Q Okay. And so you're saying the pumping
22 to the SCR system, there's only a couple gallons
23 per hour?

24 A Something like that. I can tell you
25 exactly.

1 Q Yeah, I'd be interested in that.

2 A If both units are running full load,
3 like we talked about before, each one of them
4 would have about 28 gallons per hour or a little
5 less than one gallon a minute going through them
6 toward the SCR. And so if there was a spill,
7 there would just be a few gallons left in the pipe
8 back to the tank that could have any possibility
9 of spilling.

10 Q Okay. So if you were to use urea
11 pellets, would an ammonia-on-demand system be able
12 to produce that small amount of ammonia per hour,
13 what was it, 28 gallons per hour?

14 A For each turbine?

15 Q Mm-hmm.

16 A Yes. Theoretically, yes.

17 Q Okay. The next question is if Mirant
18 was starting to use the urea pellets, what type of
19 containment systems would they need for that, or
20 would they need any containment system?

21 A Well, I think it would be like dry
22 storage. It would be in a bin or tank.

23 Q Did you evaluate the cost between just
24 needing a bin or a tank versus the elaborate
25 containment that you need for aqueous ammonia?

1 A We did not look at the -- I won't speak
2 for Mirant, they may have looked at that part. I
3 asked Mirant for an overall cost difference for
4 putting those two in, and it's addressed in one of
5 the data requests we had, and I think it was 1.5
6 million it would cost more to operate with ammonia
7 on demand than with the aqueous ammonia.

8 Q But you don't know how that was derived?

9 A No, I don't.

10 Q Okay. Let me just -- Well, this is a
11 different topic, but on page nine of your
12 testimony, you state that there are trace amounts
13 of additional metals returning from the
14 catalyst -- I can give you a line number if you
15 need it. Anyway, I was just curious if you knew
16 what those trace metals were.

17 A Yes, I did a data request with those.
18 If you give me a few minutes, I probably can find
19 it. Do you want me to?

20 Q Yes.

21 A Okay. It's in the data response to
22 the --

23 MR. CARROLL: It's the Dogpatch
24 Neighborhood Association requests 86 through 100.

25 THE WITNESS: Mm-hmm, and number 96 asks

1 what are the other metals which may be in the
2 catalyst waste. And it's a fairly complicated
3 answer, but if you want I can --

4 BY MR. ROSTOV:

5 Q No, if it's in data request 96 and
6 that's part of the record, that's fine.

7 A Yes.

8 Q Could I just see it? I don't have a
9 copy of that here.

10 A Sure.

11 Q This data request also discusses, right
12 up here, trace amounts of metals. So can you
13 define the trace amounts of those other metals?

14 MR. CARROLL: Define them in terms of
15 what they are, or --

16 BY MR. ROSTOV:

17 Q Just what they are, yes.

18 A Well, we tell you what the underlying
19 structure for the catalyst bed is made, we tell
20 you what the carrier compound that coats the
21 structure and the primary catalytic materials, but
22 I guess it's a matter of individual companies that
23 make SCRs or catalysts what they put in there.
24 They're in very small amounts and they're embedded
25 in a solid structure.

1 Q Okay. I just have a couple more
2 questions. I'm not sure -- In response to
3 somebody's question earlier, it might have been
4 Mr. Valkosky's, regarding how is Mirant going to
5 separate sodium chlorite and ammonia from mixing,
6 you said Mirant will be doing what they're doing
7 now, in terms of just having good practices about
8 keeping chemicals separated; is that correct?

9 A Yes.

10 Q But now they don't have either -- they
11 don't have ammonia on site in the large quantities
12 that they're going to have once Unit Seven is
13 built. So is there a plan for segregating the
14 chemicals, once there is a larger quantity of
15 ammonia?

16 A Yes. I mean, there is no reason to put
17 them close to each other, so, I mean, there would
18 need to be in the design, and I agree with you, a
19 conscious planning step to make sure that where
20 the ammonia is stored is not close to or even
21 where the trucks pass, if possible, not -- they
22 wouldn't need -- the ammonia trucks pass, would
23 not pass close to the other chemicals and the
24 other chemical trucks would not pass close to the
25 ammonia. And that could be done.

1 Q Okay, but that hasn't been evaluated or
2 studied in this location?

3 A Well, not yet, no.

4 Q Okay. And then I just have one more
5 question, I think. Right now in existing fuel
6 tanks three, four, and five, there is -- I know
7 there is bunker sea oil in some of them, and I
8 think some kind of jet fuel in the other one.
9 During construction, did you study any risk of
10 catastrophic explosions or something due to, like,
11 the construction being too close to these tanks
12 that are containing all this oil?

13 A No, I didn't consider that to be an
14 event that I could conceive of happening.

15 Q Okay.

16 MR. ROSTOV: That's it.

17 HEARING OFFICER VALKOSKY: Thank you,
18 Mr. Rostov. I have one followup.

19 You testified that you did not know with
20 any specificity the level of ammonia concentration
21 that would result from a catastrophic failure of
22 both 20,000-gallon tanks; is that true?

23 THE WITNESS: Yes.

24 HEARING OFFICER VALKOSKY: Do you have
25 any idea whether or not that resultant level would

1 be above 266 parts per million?

2 THE WITNESS: I do not know.

3 HEARING OFFICER VALKOSKY: Okay, thank
4 you.

5 Mr. Ramo?

6 MR. RAMO: No questions.

7 HEARING OFFICER VALKOSKY: No questions.

8 COMMISSIONER KEESE: I do.

9 Mr. Lague, would you agree that these
10 design features, the containment design features,
11 this wall, they're designed for the improbable
12 event that you keep referring to?

13 THE WITNESS: Yes.

14 COMMISSIONER KEESE: So that's the
15 premise of even having these safety features.
16 It's for that one-in-a-million occurrence. It's
17 for that -- I mean, it's for the improbable event,
18 correct?

19 THE WITNESS: Yes.

20 COMMISSIONER KEESE: Okay. Given that,
21 that they're designed for the improbable event,
22 what is the rationale for having only, the
23 capability of only containing 92 percent of the
24 second tank, as opposed to designing the sump for
25 100-percent containment of both tanks? Why that

1 eight percent that's not containable?

2 THE WITNESS: I don't know why. That's
3 the project as I was given it to analyze. But, as
4 I said, it almost can't happen, because --

5 COMMISSIONER KEESE: But no, no, no, the
6 premise is they are designed for the improbable
7 event. That's a given.

8 THE WITNESS: Mm-hmm.

9 COMMISSIONER KEESE: Okay. So you're
10 designing -- not you, but Mirant is designing for
11 92-percent containment of the second tank in the
12 event of this improbable event. What is the
13 rationale for leaving out that eight percent? Why
14 not design it so it contains 100 percent of both
15 tanks, do you know?

16 THE WITNESS: No.

17 COMMISSIONER KEESE: Are you -- Is this
18 typical, based on your experience in other
19 projects that you've worked on? Is there this
20 eight percent that's out there floating,
21 uncontainable? Is that a normal design feature,
22 or is it something unique with this typical
23 project?

24 THE WITNESS: I don't really know. I
25 know that the normal worst-case accident that

1 we're asked to evaluate is one, the single-largest
2 vessel, not two largest vessels.

3 COMMISSIONER PERNELL: I'm not sure it
4 would be uncontained. It would just be above
5 surface.

6 THE WITNESS: Yes --

7 COMMISSIONER PERNELL: But you would
8 have another containment wall around it.

9 THE WITNESS: That's correct.

10 HEARING OFFICER VALKOSKY: Just one
11 point of clarification, and Mr. Lague, I'm
12 referring to page seven, lines 20 through 22 of
13 your testimony, and just a point of clarification
14 on the record, you say that data response 88
15 identifies a portion of your letter, explain that
16 the underground secondary containment vault is
17 sized to contain the full contents of one 20,000-
18 gallon tank plus the volume of the largest
19 historical 24-hour rainfall amount.

20 Now, is that the design criteria, or is
21 the design criteria that you mentioned before, one
22 20,000-gallon tank plus 90-odd percent of the
23 other?

24 THE WITNESS: The former is actually
25 what the Uniform Fire Code says you have to have,

1 enough for one vessel plus this worst-case 24-hour
2 rainfall. What Mirant has done, and, you know, we
3 can probably find during your hearings someone
4 from Mirant to tell you why, they have made it big
5 enough to hold one full tank plus almost all of
6 another tank. But that's just above and beyond
7 what they have to do to meet the Fire Code.

8 HEARING OFFICER VALKOSKY: Okay. So
9 then is this statement in your testimony
10 incorrect?

11 THE WITNESS: I didn't think so, but
12 would you say it again?

13 HEARING OFFICER VALKOSKY: My question
14 is the design criteria. I mean, it says, "The
15 underground secondary containment vault is sized
16 to contain the full contents of one 20,000-gallon
17 tank plus the volume of the largest historical 24-
18 hour rainfall amount." And what I just heard you
19 say is that the containment is sized to hold
20 20,000 gallons plus 90 percent of another 20,000
21 gallons, so roughly 38,000 gallons.

22 THE WITNESS: Yes.

23 HEARING OFFICER VALKOSKY: Okay. Which
24 one is it? That's where I'm confused. Is it the
25 one that's in your written testimony or the one

1 that you mentioned orally or are we talking about
2 different things?

3 THE WITNESS: It's designed to hold --
4 I'm reading now from our response to the staff
5 assessment, and we clarified the language that
6 they had used. It said, "Haz four requires a
7 secondary containment basin to hold 150 percent of
8 the storage volume, plus the volume associated
9 with 24 hours of rain, assuming a 25-year storm."
10 The secondary containment area described in the
11 AFC would hold 150 percent of one storage tank
12 plus a 24-hour rainfall with a 25-year storm, but
13 not 150 percent of both. In fact, the third --
14 Under engineering controls that we were referring
15 to there, it correctly states that the sump will
16 hold 37,163 gallons, which is not quite enough to
17 hold both --

18 HEARING OFFICER VALKOSKY: Okay, and
19 that's the design criteria, as far as you know?

20 THE WITNESS: Yes.

21 HEARING OFFICER VALKOSKY: Thank you.

22 COMMISSIONER KEESE: And if I -- Just to
23 clarify your response to my last question, you're
24 not aware of other design criteria of -- design
25 criteria of other projects you've worked on? Is

1 this comparable? Is this unusual?

2 THE WITNESS: I believe it's comparable.

3 COMMISSIONER KEESE: Okay. And you're
4 not aware why they just don't design the
5 underground vault for 40,000 gallons, why they cut
6 it off at 37,1-and-some-odd gallons?

7 THE WITNESS: I do not know.

8 COMMISSIONER KEESE: Okay. Likewise
9 with the liner, again, it's designed for the
10 improbable event, that's a given. So why wouldn't
11 Mirant put the liner in?

12 THE WITNESS: I guess it's just an
13 evaluation of cost versus risk.

14 COMMISSIONER KEESE: Do you know what
15 the additional cost might be?

16 THE WITNESS: No.

17 COMMISSIONER KEESE: Okay. And you made
18 a statement earlier with respect to the pellets,
19 use of the pellets. It's \$1.5 million extra per
20 what?

21 THE WITNESS: I think that's the capital
22 cost.

23 COMMISSIONER KEESE: Capital cost. So
24 to bring in pellets sufficient to replace 20,000
25 or 40,000 gallons or 20,000 gallons of aqueous

1 ammonia, to get the same emission reduction or
2 emission control benefit, it costs \$1.5 million
3 more per load? Could you clarify that, please.

4 THE WITNESS: The capital cost
5 differential -- This was a response that I got
6 some data from Mirant and answered that question.

7 MR. CARROLL: Just to be clear, this is
8 the response to data request 95 from the Dogpatch
9 Neighborhood Association.

10 COMMISSIONER KEESE: Okay, thank you.

11 THE WITNESS: The capital cost
12 differential between the two systems has been
13 estimated by Mirant to be between \$1- and \$1.5
14 million, with the urea-to-ammonia system being the
15 more expensive technology. Operating cost of the
16 urea-to-ammonia system are also significantly
17 higher, since unlike the simpler aqueous ammonia
18 system, one to two dedicated technicians per shift
19 would be required to operate and maintain the
20 system; however, noted in the response to data
21 request 92, system reliability and responsiveness
22 were the primary issues leading to selection of
23 aqueous ammonia for the Potrero Unit Seven
24 project.

25 COMMISSIONER KEESE: One point five

1 million is the capital cost differential. Do you
2 know what the capital costs are of the two
3 systems?

4 THE WITNESS: No.

5 COMMISSIONER KEESE: Okay. And do you
6 know of other projects where the pellets are being
7 used?

8 THE WITNESS: I know of one project in
9 Southern California that has agreed to do it as
10 well. I think you've heard testimony that Mirant
11 has -- another one I know about is Mirant has done
12 it in a plant in Massachusetts that was an oil
13 base-load facility.

14 I worked on a project in Huntington
15 Beach which is an AES project to refurbish Units
16 Three and Four, too old. I didn't do the
17 hazardous materials one on that one, I did the air
18 quality section. But I do know that they agreed
19 to use a system called U2A, which is urea to
20 ammonia, which is similar in concept to this. As
21 of yet, neither of those units is running, so I
22 don't know how it works.

23 COMMISSIONER KEESE: Okay, thank you.

24 COMMISSIONER PERNELL: Just a followup
25 on the sump, how big is the concrete, do you know?

1 THE WITNESS: I don't think it's
2 probably in that picture that I have, so I guess I
3 don't know.

4 COMMISSIONER PERNELL: This is following
5 up on the decision not to use the liner, so my
6 question is how thick is the concrete and the
7 probability of ammonia seeping through the
8 concrete into the ground?

9 THE WITNESS: I sincerely doubt if
10 that's actually been determined yet. They know
11 they're going to have concrete and they've talked
12 about putting sealant on it as a coating, to
13 encourage a spill to stay in the sump, but I don't
14 think they have yet determined the depth of the
15 concrete.

16 HEARING OFFICER VALKOSKY: Anything else
17 for this -- I'm sorry, any redirect, Mr. Carroll?

18 MR. CARROLL: Yes. If I could have just
19 a moment to confer with Mr. Lague before we begin
20 redirect.

21 (Brief recess.)

22 COMMISSIONER PERNELL: Please continue.

23 REDIRECT EXAMINATION

24 BY MR. CARROLL:

25 Q Mr. Lague, over the course of your

1 testimony today, have you had occasion to obtain
2 information from representatives of Mirant
3 regarding the material that the ammonia storage
4 tanks will be made of?

5 A Yes.

6 Q And what is that material?

7 A Steel.

8 COMMISSIONER PERNELL: Do you know the
9 gauge?

10 (Laughter.)

11 BY MR. CARROLL:

12 Q I want to draw your attention,
13 Mr. Lague, to page 8.12-12, section 8.12 of the
14 AFC which you're sponsoring today. This relates
15 to the design of the containment system for the
16 ammonia storage tanks, and I'm showing you a page
17 with some bracketed language. What I'd like you
18 to do, if you could, please, and I apologize for
19 reading into the record, but there is a fair
20 amount of confusion that's been created about
21 this.

22 Would you please read into the record
23 the language that I've bracketed in that portion
24 of section 8.12.

25 A Okay. We're talking about the

1 underground sump here. The text is, "It is
2 designed to hold the entire contents of the
3 largest aqueous ammonia vessel on site, one of the
4 20,000-gallon storage tanks, plus the maximum
5 rainfall recorded in 24 hours in the past 51
6 years, which was 5.59 inches in 1982," and a
7 reference for that is given. "In fact, the
8 ammonia storage facility containment area has more
9 than sufficient volume to contain the entire
10 contents of two completely full 20,000-gallon
11 tanks plus the maximum 24-hour rainfall ever
12 recorded at the San Francisco Airport.

13 "Furthermore, with dimensions of 46 feet
14 long by nine feet wide by 12 feet deep, the
15 covered underground vault that is provided for
16 secondary containment has a volume of 4,968 cubic
17 feet, 37,163 gallons, or almost 93 percent of the
18 combined capacities of both aqueous ammonia
19 storage tanks.

20 "The quantity of stored aqueous ammonia
21 on site at any one time will usually be at a level
22 well below 93 percent of the two tanks' full
23 capacity; thus, the containment system is intended
24 to essentially achieve full capture of released
25 aqueous ammonia by the covered vault, even in the

1 extremely unlikely case of a catastrophic event
2 sufficient to cause a 100-percent loss from both
3 tanks."

4 Q Thank you. And based on that
5 information, would it be your assumption that the
6 reason that the secondary containment is not
7 designed to hold the full volume of both storage
8 tanks plus the largest amount of stormwater
9 generated over a 24-hour period in the last 50
10 years would be because it would be, and to use
11 some shorthand -- in other words, the reason that
12 the extra seven percent is left out is that it
13 would be a highly unlikely event to have a
14 catastrophic failure of both tanks during a 50-
15 year storm event?

16 Would you assume that that's why the
17 engineers decided that it was safe to leave out
18 the additional seven percent?

19 A That could be it, yes.

20 Q Now, the off-site consequence analysis
21 that you did for a release of ammonia from the
22 storage tanks, what drives the off-site
23 consequence analysis in terms of the amount of --
24 Let me back up. Is it true that what drives the
25 off-site consequence analysis the quantity of

1 ammonia that's exposed to the atmosphere?

2 A Yes.

3 Q Okay. And when you did the off-site
4 consequence modeling, how did you determine what
5 amount of ammonia would be exposed? Is it the
6 openings in the secondary containment system?

7 A Yes. It's that we assumed that all of
8 the drain hole -- There's three here, there's one
9 under the truck unloading area, and there's one
10 under each of the storage tanks. And we assumed
11 the combined area of those three is the area
12 through which evaporation into the atmosphere
13 could happen.

14 Q Okay. So when you analyzed the scenario
15 that you described, the failure of a single tank,
16 you assumed that the amount of exposure was what
17 was exposed to those drain holes.

18 A Yes.

19 Q Okay. So given the testimony that
20 you've just read, which was that even in the event
21 of the catastrophic failure of both tanks that the
22 secondary containment facility would be capable of
23 holding all of that material, wouldn't the exposed
24 surface of ammonia be the same?

25 A As long as there is enough room in the

1 vault to contain it, yes. The area is the same.

2 Q Okay. So except in the scenario where
3 you have catastrophic release of both tanks, 100-
4 percent full during a 50-year storm event, the
5 amount of exposed ammonia would be the same under
6 the scenario that you analyzed and the scenario of
7 a both-tank failure.

8 A Yes, it would.

9 Q Okay. So the risk at the fence line and
10 the risk at all the other points that you analyzed
11 would be exactly the same under the scenario of
12 both tanks failing as it was in the scenario that
13 you analyzed of one tank failing.

14 A Yes.

15 Q Okay. Thank you. I want to now draw
16 your attention to a response to a data request
17 that you prepared. This is data request 113 from
18 Southeast Alliance for Environmental Justice, and
19 this relates to the liner beneath the sump. And
20 what I'm going to ask you to do again is please
21 review for us the language that I've bracketed
22 beginning at the bottom of page 65 and continuing
23 up at the top of page 66.

24 A Okay. "The containment structures will
25 be designed as watertight enclosures with water

1 stops through the joints to prevent leakage and
2 extra support in sealants to prevent relative
3 movement where pipes penetrate concrete walls.
4 Mirant has agreed to use a sealant on the surfaces
5 of the secondary containment sump as an additional
6 precaution against leakage to the soil below. A
7 liner is not planned.

8 "Strategies to prevent losses by
9 cracking or rupture of rigid piping and/or pipe
10 connections may include the use of flexible
11 connectors, more flexible pipe materials, for
12 example, polyurethane rather than PVC, and
13 mounting pipes within larger protective pipes to
14 allow room for movement.

15 "After all perceptible seismic events,
16 the secondary containment area will be inspected
17 and repaired if significant concrete cracking has
18 occurred."

19 Q So, in light of that, would you expect
20 there to be -- Let me rephrase the question. In
21 light of that, do you think that there is a
22 reasonable possibility of ammonia leaking to the
23 soil as a result of being discharged into the
24 containment system?

25 A No.

1 Q The functioning of this containment
2 system, which we've just gone over in terms of the
3 operation of the primary and secondary containment
4 system, would that function in essentially the
5 same way, regardless of the nature of the failure
6 of the tanks? In other words, let's assume a
7 number of scenarios. One might be some sort of a
8 hole near the bottom of a tank, another might be
9 some sort of event that would shear off a piece
10 near the top of the tank.

11 Is the system designed to work exactly
12 the same way, regardless of the nature of the
13 failure of the tanks?

14 A Yes. There are drain holes right below
15 the tank to capture anything that falls from any
16 part of the tank.

17 Q Do you view the likelihood of a release
18 from a truck located outside the -- I'm sorry,
19 strike that.

20 I want to draw your attention now back
21 to section 8.12 of the AFC. I'm now moving away
22 from the containment area surrounding the storage
23 tanks to the containment area in the unloading
24 area. And I'm looking at page 8.12-13 of the AFC,
25 section 8.12. Could you please read into the

1 record the language that I've bracketed which
2 describes the containment area in the loading
3 area.

4 A Right. This is under the section called
5 Alternative Release Scenarios. As we talked about
6 before, the worst-case release was considered to
7 be one of the storage tanks releasing, and an
8 alternative release scenario, which we thought was
9 the second most probable thing that would happen
10 to cause a large ammonia release, is a release
11 during unloading of a tanker truck.

12 "In this alternative release scenario,
13 the aqueous ammonia would flow from the tanker
14 truck unloading line and drain almost instantly
15 into the covered sump. Assuming this aqueous
16 ammonia spreads to fill the entire length and
17 width of the sump, it will evaporate to the
18 atmosphere only through the drain holes. The
19 evaporation pool area will be the same as for the
20 worst-case scenario described in the previous
21 section, though the emission rate for this
22 alternative scenario will be lower, due to the
23 different meteorological conditions that were
24 assumed for this case."

25 Q Okay. And you modeled the impacts of

1 both of the scenarios that we've just gone over,
2 one being the catastrophic failure of the single
3 tank, which we've now established is essentially
4 the same as the catastrophic failure of two tanks,
5 and the other being the failure of the truck in
6 the loading area, which causes a complete release
7 of all of the contents of the truck. You modeled
8 both of those scenarios; is that right?

9 A Yes.

10 Q And you found that under both scenarios,
11 the maximum concentration of ammonia at the fence
12 line was less than 75 parts per million; is that
13 right?

14 A Yes.

15 Q Do you view the likelihood of a release
16 from a truck while located outside of the loading
17 area as a likely event?

18 A I do not.

19 Q And could you explain why you wouldn't
20 view that as a likely event?

21 Well, let me rephrase the question.
22 What is the most likely cause of a release of
23 ammonia during loading or from a truck?

24 A It would be the breaking of one of the
25 hose connections.

1 Q Okay, and why would that -- And would it
2 be your opinion that a break in one of the hose
3 connections would be unlikely to occur while the
4 truck is outside of the loading area?

5 A I don't think the truck would be likely
6 to be outside the unloading area.

7 Q Okay. Can you explain that?

8 A Well, there is going to be a requirement
9 to drive the truck so that it's positioned right
10 over this drain.

11 Q So you would not expect to have an
12 operator interfering with or using the truck
13 outside of the loading area.

14 A No. The driver would get out of the
15 truck and look at everything and do the
16 connections manually before he started the flow of
17 ammonia, so it should be pretty obvious to him
18 that he wasn't where he was supposed to be, if
19 that were the case.

20 Q Okay, and you would not expect a driver
21 to undertake any of those activities outside of
22 the loading area.

23 A No.

24 Q Do you see a release from the piping
25 system between the ammonia storage facility and

1 the SCR unit as a probable occurrence?

2 A No, it's not a probable occurrence. We
3 have looked at it in other cases where for some
4 other reason that was asked for by an agency. The
5 thing that limits the volume of a spill like that
6 is that, as I said before, it's on the order of
7 one gallon a minute going through the pipe to each
8 SCR, and there are sensors that detect a change in
9 the pressure that would indicate that there was a
10 break in the line that automatically would stop
11 the pumping of the ammonia from the storage tank
12 to the SCR.

13 So the most that, you know, we've even
14 done it as, you know, up five minutes or something
15 like that of continued pumping at something like
16 one gallon a minute, and you can see that wouldn't
17 be very much ammonia.

18 Q Okay. So would you consider that sort
19 of a release, unlikely, highly unlikely? How
20 would you describe it?

21 A I would say it's highly unlikely.

22 Q What about any sort of a release that
23 might cause ammonia to get into the city's sewer
24 system, and I believe it was Mr. Rostov that asked
25 theoretically -- these aren't his exact words, but

1 there was a question to the effect of, you know,
2 could it happen, sort of in a theoretical sense.

3 Do you view a release that results in
4 ammonia getting into the city's sewer system? How
5 would you characterize the possibility of that
6 event, likely, unlikely, high unlikely?

7 A Well, I think it would be -- I mean,
8 these details about where the drains will be and
9 everything relative to where the ammonia piping
10 probably have not been completely worked out yet,
11 but it would be my understanding that the design
12 of the ammonia piping system would take that into
13 account and to avoid that, and one of the ways
14 that's been done before is to have double piping,
15 so that if one pipe broke, the other one would
16 still keep it from spilling.

17 Q And do you know if Mirant plans to have
18 double piping on this facility?

19 A No, but we do on Mirant's Contra Costa.

20 Q So it's your expectation that there will
21 be elements in the final design of the system that
22 would make it unlikely for there to be an ammonia
23 release that would reach the city's sewer system?

24 A I do view it as unlikely.

25 Q Thank you.

1 MR. CARROLL: I have no further
2 questions.

3 HEARING OFFICER VALKOSKY: Recross,
4 Mr. Westerfield?

5 MR. WESTERFIELD: I just have one
6 question of recross that I hope will clarify
7 something.

8 RE CROSS-EXAMINATION

9 BY MR. WESTERFIELD:

10 Q All right. Mr. Lague, could you pull
11 out for me, please, the AFC at where is it, the
12 hazardous materials handling section, 8.12. In
13 there, there is a table, table 8.12-2. It looks
14 like you're already there.

15 A Yes.

16 Q And I think it indicates -- What is the
17 title of that table?

18 A Existing Hazardous Materials Used at the
19 Potrero Power Plant.

20 Q Okay. Is that -- Is your understanding
21 that that is existing before the Unit Seven
22 project?

23 A Yes.

24 Q And the first entry has battery,
25 electrolyte, sulfuric acid?

1 A Yes.

2 Q And it has maximum quantity on site.

3 What does that read?

4 A Five thousand pounds.

5 Q Now, I think earlier you testified that
6 there was no sulfuric acid use presently at the
7 site.

8 A Well, when I looked at this table I
9 missed it. This is the same table. So, I mean, I
10 was looking for sulfuric acid and it was battery
11 electrolyte.

12 Q All right. So does this change your
13 testimony?

14 A I can't remember the full context, but I
15 know that if I said there was no sulfuric acid
16 there at present, I was wrong.

17 Q Okay. So as far as you're concerned,
18 does the Unit Seven project increase the amount of
19 sulfuric acid use at the site?

20 A I believe it does.

21 Q And by how much, do you know?

22 A There will be more batteries, but I
23 don't know that we've listed the increase in this
24 table.

25 Q Okay. I'm sorry, what was your last

1 response?

2 A We don't list it as -- I just don't
3 remember if we're planning on having -- It's my
4 recollection that we would have additional
5 batteries associated with the new unit. So there
6 would be sulfuric acid for those, but I don't see
7 that listed in the table.

8 Q Okay. Could you take a look at table
9 8.12-4.

10 A That is where I'm looking.

11 Q Okay. Well, I had you looking -- and
12 you jumped before I asked you.

13 A Oh, I thought you asked about Unit
14 Seven.

15 Q Yes, that's absolutely right. So now
16 you're looking at 8.12-4, which concerns Unit
17 Seven, correct?

18 A Yes.

19 Q And can you read the title of that
20 table.

21 A Hazardous Materials to be Added at
22 Potrero Power Plant During Operational Phase of
23 Unit Seven.

24 Q Okay. And is sulfuric acid listed there
25 as a hazardous material to be added at the Potrero

1 power plant?

2 A I do not see it.

3 Q Okay. And this is part of the AFC; is
4 it not?

5 A Yes.

6 Q Okay. So it looks like according to
7 this submission, no sulfuric acid use will be
8 added as part of the Potrero Seven project, but
9 it's your testimony, is it not, that some amount
10 will be added but you're not sure how much?

11 A Yes.

12 Q Okay.

13 A I want to look in the text, when we
14 talk -- it's possible it just didn't put in the
15 table.

16 Q Would you check on that for me, please.

17 A Yes. I don't see it listed.

18 Q In the text.

19 A No.

20 Q All right. So is it still your
21 testimony that there will be increased sulfuric
22 acid use as a result of Unit Seven?

23 A It is my recollection that there would
24 need to be for the batteries, for the new unit.
25 Why it's not here makes me wonder if I'm

1 remembering right, but it doesn't say that in this
2 section.

3 Q Okay. Maybe I'd just like to make a
4 point to Mr. Carroll --

5 MR. CARROLL: We will confirm, we'll
6 reconcile Mr. Lague's recollection with what
7 appears in the written testimony and provide that
8 information to the committee.

9 MR. WESTERFIELD: Thank you. It's
10 important because one of our proposed conditions
11 of certification essentially states that the
12 applicant is limited in its use of hazardous
13 materials to what's listed basically on this
14 table. And so we need to get that straight.

15 HEARING OFFICER VALKOSKY: Okay, and if
16 we can get -- Mr. Carroll, do you understand with
17 sufficient specificity what it is that staff
18 wants?

19 MR. CARROLL: Yes. They want to know if
20 there will be additional sulfuric acid stored on
21 the site as a result of Unit Seven. And
22 basically, that can be translated into an
23 accurate, maybe a revised table 8.12-4.

24 HEARING OFFICER VALKOSKY: Okay, and
25 when will you submit this?

1 MR. CARROLL: Within a week.

2 MR. WESTERFIELD: Thank you.

3 That's it.

4 HEARING OFFICER VALKOSKY: Ms. Minor?

5 MS. MINOR: No recross.

6 HEARING OFFICER VALKOSKY: Mr. Rostov?

7 MR. ROSTOV: No recross.

8 HEARING OFFICER VALKOSKY: Mr. Ramo?

9 MR. RAMO: I have a question on recross.

10 May I go ahead?

11 HEARING OFFICER VALKOSKY: Yes, please,

12 I'm sorry.

13 RE CROSS-EXAMINATION

14 BY MR. RAMO:

15 Q Did I understand your testimony
16 correctly that the fact that two tanks might be
17 involved in an accident produces the same results
18 because the area of, the surface area of the
19 liquid is the same?

20 A It would result in the same short-term
21 maximum impact.

22 Q Is that because the surface area of the
23 exposure is the same?

24 A Yes.

25 Q That goes to emissions rate; doesn't it?

1 A Yes.

2 Q It doesn't go to the length of exposure,
3 does it?

4 A No. You're right, the area, if you'll
5 let me call it, the interface between the air and
6 the pool of ammonia that's in that sump, that's
7 probably the biggest determining factor in what
8 the downwind concentration will be.

9 Q If you have twice as much liquid being
10 exposed to the air, doesn't that mean the amount
11 of chemical that gets into the air is twice as
12 much?

13 A Not if you clean it up fast. It's just
14 driven by a surface area at the top of it. It's
15 not the volume, it's the area at the top that
16 drives the emission count.

17 Q So your analysis depends on that there
18 is no greater exposure at the fence line to your
19 assumption that the spill will be cleaned up
20 quickly in time before the second tank's volume is
21 involved; is that correct?

22 A Well, it assumes, then, there is -- you
23 know, the intended procedure would be that as soon
24 as such a spill happened, the contents of that
25 sump would be pumped to a holding tank to be dealt

1 with. And so all we're saying is that the area in
2 which the ammonia can enter the atmosphere, can
3 enter the air, is just through the surface.

4 So the fact that the surface is on top,
5 the top surface of the liquid is on top of a
6 shallower pool or a deeper pool doesn't change
7 what's going to happen in the next 15-30 minutes.
8 It could continue, if you were not going to clean
9 it up fast, then over many hours you would get
10 down to a place where you would be continuing the
11 emission process longer than you would if it was
12 only one. Because it's just how much has
13 evaporated.

14 Q Right. If I have a hose and I'm
15 shooting one gallon of water through it and
16 another time I'm shooting two gallons of water
17 through it, the hole is the same, it all depends
18 on how much water I'm shooting through; is that
19 correct? See that analogy here?

20 A I don't think so, no. We have a basin
21 underground. It looks like a box. And that box
22 is filled to some depth with liquid. If there was
23 a catastrophic spill, it would be filled with
24 liquid. And the rate, the pounds per minute of
25 ammonia going into the atmosphere is governed at

1 that point by, primarily by the area, the top area
2 of that, the length by the width but not the
3 depth.

4 Q And that's the formula you have at page
5 8.12-13 in the AFC; is that correct?

6 A Yes, A. A is the area.

7 Q And on page 8.12-14 there is a formula
8 for your emission rate of ammonia, correct?

9 A Per unit area, yes.

10 Q And that's per unit area.

11 A Mm-hmm.

12 Q So again, it all depends on how quickly
13 it's cleaned up to determine whether twice as much
14 volume of material evaporating ends up in an
15 exposure that's greater or not.

16 A I don't think the magnitude of the
17 concentration in this very hypothetical situation
18 you're describing would change, but the duration
19 of it would change if you didn't clean it up.
20 That would be a seriously bad thing to do, whether
21 you spilled one tank in there or two tanks in
22 there.

23 Q And exposure time is an important factor
24 in determining the health impact of a toxic
25 chemical; is that correct?

1 A Sure.

2 Q And you believe if we're doing a worst-
3 case analysis involving a catastrophic release of
4 two tanks, it would be reasonable to assume that
5 there might be other problems that would interfere
6 with the ability to do a quick cleanup; isn't that
7 a fair assumption?

8 A Shouldn't happen. There's a mechanism,
9 as I said, to pump the ammonia away.
10 Alternatively, you could cover up the hole until
11 you could pump it away.

12 Q It shouldn't happen. So your view is
13 that when you think about the catastrophic events
14 that might cause a breach, it's your opinion that
15 none of those kinds of catastrophic events, an
16 earthquake greater than the design factor, a
17 suicide bomber in a small plane hitting the tanks,
18 that none of those kinds of events, those kinds of
19 serious catastrophic events ought to be considered
20 to interfere with the ability to clean up that
21 kind of spill?

22 COMMISSIONER PERNELL: Do you understand
23 the question?

24 THE WITNESS: Yes, sir, I'm just trying
25 to think what my answer would be. I have not

1 considered whether -- I mean, we followed the
2 procedure that we were required by regulation to
3 follow, and I'm just not sure, I don't have a
4 feeling for the likelihood at all, I just don't
5 have any feeling for what the likelihood at all,
6 sir. I just don't have any feeling for what the
7 likelihood of that event is.

8 It seems highly improbable, but that's
9 really all I can say.

10 MR. RAMO: Okay, thank you.

11 HEARING OFFICER VALKOSKY: My last
12 question, I think, has your risk analysis and
13 associated off-site analysis been performed in
14 accordance with applicable laws and regulations?

15 THE WITNESS: Yes. We followed the
16 guidance of the EPA and the California Accidental
17 Release Program's protocol. I mean, and those are
18 related to laws, yes.

19 HEARING OFFICER VALKOSKY: Okay. And,
20 to your knowledge, are there any additional
21 adopted guidance which you could have applied and
22 resulted in a more conservative worst-case
23 analysis?

24 THE WITNESS: I don't know of any.

25 HEARING OFFICER VALKOSKY: Thank you.

1 MR. CARROLL: May I have one followup
2 question?

3 HEARING OFFICER VALKOSKY: Sure.

4 REDIRECT EXAMINATION

5 BY MR. CARROLL:

6 Q Mr. Lague, and this goes somewhat to the
7 objection that I made for the record, would you
8 expect to have to do additional analysis of off-
9 site consequences of ammonia release at the time,
10 and let's assume that you were the consultant for
11 Mirant at the time that the company applied for
12 the retrofits on Unit Three?

13 A I'm sorry, I don't -- I missed the
14 question.

15 Q Okay. If and when Mirant applies to
16 install SCR on the existing Unit Three, would you
17 expect that they would have to undertake
18 additional analysis of the off-site consequences
19 of an ammonia release?

20 A Yes. Well, to be truthful, what we have
21 usually done, when there was both a new unit and a
22 retrofit unit, was to try to include both in the
23 RMP with the agency so that we would do -- because
24 you really only have one RMP for ammonia usually,
25 and so you either -- if you can anticipate that

1 there is going to be another source of ammonia,
2 you would do them both together, and if you -- or
3 if you didn't do that, if you just did it for the
4 first unit, whichever of these two events happens
5 first, then you just have to go back and amend it
6 as soon as you bring in the second unit.

7 So that's how it would work.

8 Q But at such time that Mirant does, if
9 they do submit applications for Unit Three, would
10 you expect that the lead agency that's responsible
11 for permitting that unit would evaluate whether or
12 not the analysis that had been done previously was
13 sufficient for both Unit Seven, which by that time
14 would have been permitted, hopefully, and Unit
15 Three?

16 A Yes.

17 Q So it's your expectation, and let's say,
18 for example, that the Bay Area Air Quality
19 Management District is the lead agency and the
20 City of San Francisco is involved, at such time as
21 they were issuing permits for the retrofit of Unit
22 Three, they would revisit any previously completed
23 analysis that Mirant had completed to make sure
24 that with the addition of ammonia for Unit Three
25 the analysis was sufficient?

1 A Yes.

2 MR. CARROLL: Okay, thank you.

3 HEARING OFFICER VALKOSKY: Any re-
4 redirect confined to the scope of the three
5 questions in the re-recross? No?

6 MR. WESTERFIELD: Can't think of any.

7 HEARING OFFICER VALKOSKY: Ms. Minor?

8 MS. MINOR: No.

9 HEARING OFFICER VALKOSKY: Mr. Rostov?

10 MR. ROSTOV: No.

11 HEARING OFFICER VALKOSKY: Mr. Ramo?

12 MR. RAMO: No.

13 HEARING OFFICER VALKOSKY: Any other
14 questions for this witness?

15 The committee thanks and excuses the
16 witness.

17 (The witness was excused.)

18 HEARING OFFICER VALKOSKY: Do you have
19 any exhibits, Mr. Carroll?

20 MR. CARROLL: Yes. Thank you. At this
21 time I'd like to move entry of the portions of the
22 following exhibits that were identified by
23 Mr. Lague in his prepared and oral testimony.
24 Those are Exhibits One, Six, Nine, 11, 12, 15, 28,
25 38, and 39.

1 HEARING OFFICER VALKOSKY: Okay.

2 Mr. Carroll, a very minor point, but I don't know
3 if it's identified, Exhibit 28, as your cultural
4 resources exhibit; 37 --

5 MR. CARROLL: Oh, I'm sorry.

6 HEARING OFFICER VALKOSKY: -- yeah, is
7 actually Mr. Lague's testimony.

8 MR. CARROLL: I'm sorry, right. Yes,
9 delete 28 and add 37.

10 HEARING OFFICER VALKOSKY: Okay. Is
11 there objection?

12 MR. WESTERFIELD: No objection.

13 MS. MINOR: No objection.

14 MR. ROSTOV: No objection.

15 HEARING OFFICER VALKOSKY: The
16 enumerated exhibits and portions thereof are
17 received into evidence.

18 At this time it seems like a good idea
19 to take a recess.

20 COMMISSIONER PERNELL: All right.
21 Fifteen minutes.

22 (Brief recess.)

23 COMMISSIONER PERNELL: We're back on the
24 record.

25 Mr. Valkosky.

1 HEARING OFFICER VALKOSKY: Thank you,
2 Commissioner Pernell. We will resume with the
3 direct testimony on behalf of staff.

4 Mr. Westerfield, call and swear your
5 witness, please.

6 MR. WESTERFIELD: Thank you,
7 Mr. Valkosky. At this time, we'll call Rick
8 Taylor of the CEC staff.

9 THE REPORTER: Raise your hand, please.
10 Whereupon,

11 RICK TYLER
12 Was called as a witness herein and, after first
13 being duly sworn, was examined and testified as
14 follows:

15 DIRECT EXAMINATION
16 BY MR. WESTERFIELD:

17 Q Would you please state your name for the
18 record.

19 A My name is Rick Tyler.

20 Q All right, and what is your current job
21 classification or title?

22 A I'm a senior mechanical engineer with
23 the California Energy Commission and I'm
24 responsible for analysis of facility safety. I'm
25 the senior in the engineering office that deals

1 with that subject area.

2 Q All right, thank you. And how long have
3 you worked for the Commission doing analysis of
4 hazardous materials management?

5 A For more than ten years.

6 Q And did you help prepare and supervise
7 the staff's testimony entitled Hazardous Materials
8 Management for the proposed Potrero project?

9 A Yes, I did.

10 Q And would you please summarize your
11 testimony.

12 A The purpose of staff's testimony was to,
13 staff's analysis regarding hazardous materials
14 management was to evaluate the proposed handling
15 of hazardous materials that would be used at the
16 Potrero facility to determine if they posed a
17 significant risk of impact on the public and to
18 determine if such handling would be in compliance
19 with applicable LORS.

20 To do this we required the applicant to
21 identify the hazardous materials that were
22 proposed for use at the facility, the maximum
23 amounts stored on site at any time, and how they
24 would be used at the facility and transported to
25 the facility.

1 We then evaluated each material in terms
2 of its toxicity, the potential for off-site
3 migration, and the potential to be released in a
4 manner that resulted in off-site impacts. After
5 reviewing the materials proposed for use at the
6 facility, we determined that natural gas and
7 aqueous ammonia pose principal risks associated
8 with the hazardous materials that would be handled
9 at the site. That was principally due to their
10 toxicity, quantities, and potential to be
11 transported through the environment, to the
12 public.

13 We concluded that the use of natural gas
14 at the facility would not pose a significant
15 impact due to the protected effects of compliance
16 and implementation of administrative safety
17 procedures. The applicable codes include NFPA
18 85(a), which requires safety systems on components
19 burning natural gas, including double-block and
20 bleed valves, burner management systems, and
21 automated combustion controls. These systems
22 reduced the risk of leakage and explosion in
23 combustion equipment using natural gas.

24 The facility will also be required to
25 comply with NFPA 850 to install automated fire

1 protection systems throughout the facility. Staff
2 also believes that the risk of unconfined
3 explosion involving natural gas, in the event of
4 its leakage, is very low, and that other types of
5 effects from natural gas such as flares would not
6 generally pose a risk to anyone off-site.

7 The proposed project will not require
8 construction of a new underground transmission
9 line off-site. However, a short hookup line will
10 be constructed on the site and it will be required
11 to comply with CPUC General Order 112(d) and
12 58(a). Compliance with these measures and the
13 pipeline safety orders will ensure adequate design
14 of these lines. So based on that, we did not find
15 any potential for significant impact from natural
16 gas use.

17 With regard to ammonia storage and
18 handling at the facility, we concluded that the
19 regulatory requirements, design features, and
20 administrative safety procedures would confine
21 ammonia concentrations greater than 75 ppm to the
22 project site. Staff believes that ammonia
23 concentrations below 75 ppm would not pose a risk
24 of injury based on one-time exposure for half an
25 hour.

1 The basis of staff's choice of 75 ppm
2 criteria is discussed in Appendix A and B of our
3 testimony. To ensure that the materials used do
4 not change without review -- in other words, the
5 materials that they've proposed to use at the
6 site -- over the life of the project, and that
7 safety design features and other safety measures
8 proposed be implemented, staff proposed conditions
9 one, haz mat one through four.

10 In evaluating transportation of aqueous
11 ammonia on state highways to the facility, we
12 concluded that the extensive DOT regulatory
13 programs included in 49 CFR subpart (h) addressing
14 hazardous materials transportation are sufficient
15 and effective in reducing risk of ammonia
16 transportations on highways in California.

17 Staff had one concern that DOT regs may
18 be ambiguous on requiring use of a high-integrity
19 vehicle. Staff has therefore recommended
20 requiring use of a high-integrity MC 307 type
21 tanker by proposing condition of certification haz
22 five. Although we believe the existing
23 regulations regarding hazardous materials
24 transport are generally effective, we did analyze
25 the routes in the project area to identify any

1 project-specific concerns between the point where
2 the trucks would leave the major interstate and
3 travel local roads in the immediate project area.

4 Staff proposes a specific route in
5 condition haz six. This route avoids off ramps
6 that would be difficult or hazardous for large
7 trucks, as well as any active rail lines. In
8 general, releases from high-integrity vehicles
9 such as the MC 307 occur in very severe accidents
10 where the truck overturns, collides with another
11 very large vehicle such as a train, or leaves the
12 road in a violent fashion.

13 The public raised concerns regarding the
14 ramp at Cesar Chavez Road and Interstate 280.
15 Staff examined this ramp in its evaluation and
16 agrees that it is an off ramp that could be
17 potentially hazardous for large truck traffic.
18 The proposed route avoids this off ramp and any
19 rail lines.

20 With adoption of the proposed conditions
21 of certification, it is our conclusion that the
22 proposed project does not pose the potential to
23 cause significant impact from the storage,
24 handling, or use of hazardous materials at the
25 facility. That concludes my summary of my

1 testimony.

2 Q Thank you. Now, have you reviewed the
3 prepared testimonies of Sue Cone, Richard Lee, and
4 Steve Radis of the San Francisco Department of
5 Public Health regarding releases of hazardous
6 materials from the facility?

7 A Yes, I have.

8 Q And do you have any comment regarding
9 that testimony?

10 A Yes, I do.

11 Q Would you please provide your comments
12 now.

13 A The witnesses from the San Francisco
14 Health Department have raised concern that the 75
15 ppm criteria used by staff to evaluate potential
16 impacts will not adequately protect the public
17 from injurious ammonia exposures in the event of
18 an accidental release of aqueous ammonia. Based
19 on their concern regarding the use of 75-ppm
20 criteria instead of their proposed 35-ppm
21 criteria, they also state that the Commission
22 should require the use of an on-demand urea-based
23 system.

24 While we disagree with the use of the
25 35-ppm fence line criteria, we note that our

1 modeling of a worst-case event would not result in
2 concentrations above 35 ppm at the fence line.

3 Staff also had serious concerns
4 regarding the proposed use of 35 ppm STEL as a
5 public exposure criteria. First, the STEL is a
6 workplace standard, used in the context of
7 repeated exposures, day after day, throughout a
8 25-year career. This standard allows exposures of
9 up to 34 ppm for several hours each day as long as
10 the time-weighted average of exposure in the
11 workplace doesn't exceed 25 ppm.

12 This exposure regimen has no relevance
13 to a one-time accidental exposure that would have
14 a very low probability of occurrence. The US EPA
15 recommends use of 150 ppm at the nearest receptor.
16 Staff recommends use of a 75 ppm standard at the
17 nearest receptor to better protect the potentially
18 most sensitive segments of the population. Because
19 impact on the public requires exposure of some
20 member of the public, staff finds there is no
21 basis for a fence line standard.

22 Staff's modeling analysis of ammonia
23 concentrations resulting from a worst-case release
24 indicates ammonia concentrations of 32 ppm at the
25 fence line and 8.7 ppm at the nearest public

1 receptor. Staff contends that these exposures
2 would not result in any significant potential for
3 substantive injury, as demonstrated by the data in
4 Appendices A and B of our testimony.

5 With regard to the modeling and use of
6 the 35-ppm criteria, it's our belief, although
7 it's not discussed in the witnesses' two
8 testimonies, that they were relying on the
9 testimony produced by Mr. Radis, in terms of the
10 concentrations of a result from a release at the
11 facility. And this modeling, he suggested the
12 fence line was modeled provided he provided an
13 Exhibit C of his prepared testimony.

14 Staff was unable to fully evaluate the
15 reasons for differences between Mr. Radis's
16 modeling and our own due to lack of documentation;
17 however, it is our belief that our modeling is
18 extremely conservative. Our modeling was
19 conducted in accordance with EPA modeling
20 protocols. The modeling is conservative in that
21 turbulent mass transfer coefficients are used to
22 estimate the emissions from spilled ammonia, from
23 the ammonia surface when it's much more likely
24 that, in fact, laminar conditions would exist,
25 particularly in the sump, and with stability and

1 very low wind speeds.

2 Laminar mass transfer from the spilled
3 ammonia surface would reduce the emission rates by
4 more than a factor of ten. Staff also evaluated
5 the potential effect of heating by all types of
6 heat transfer on large tanks, and determined that
7 they would, in general, not change by more than
8 five percent from the average temperature. So, in
9 other words, no matter what type of conditions
10 existed outside, the temperature of the fluid in
11 the tank, which really controls the vapor
12 pressure, one of the critical factors, would not
13 change by more than five percent from the average
14 temperature because of the mass involved, because
15 of so many gallons being stored.

16 The vapor pressure of ammonia in
17 solution could change the average by five-fold
18 lower, at an average temperature of 60 degrees, as
19 opposed to the 106 that was assumed. In addition,
20 staff's model of emissions from the spilled
21 ammonia surface do not include corrections for a
22 two-component mixture. In general, the equation
23 that was given in the applicant's testimony is for
24 a one-component mixture; in other words, it's an
25 assumption that the pool is all ammonia.

1 In fact, if you make that correction,
2 you correct the output by about a factor of three,
3 because it's 30 percent ammonia. So 30 percent of
4 the surface area is available -- It's 30 percent
5 of the surface area that is exposed is actually
6 ammonia molecules. The rest is all water. We
7 don't care about exposure to water.

8 We also take exception with Mr. Radis's
9 assertion that there would be a 17.2 psi pressure
10 in the tank at 90 degrees F. This implies 17.2
11 psi above atmospheric pressure. However, the
12 vapor pressure is in a psi absolute; in other
13 words, when you look at the graphs for that, which
14 would be 4.5 psi above atmospheric. And again,
15 keep in mind that we don't believe that the tanks
16 would ever deviate more than five degrees from 60
17 degrees or thereabouts, and therefore, we believe
18 that the vapor pressure of the ammonia would be
19 below atmospheric virtually all the time.

20 We further take exception with
21 Mr. Radis's estimate of storage tank failure
22 rates. His estimate of 9.5×10^{-5} is based on
23 existence of tanks worldwide and does not reflect
24 the protective effects of seismic floor design and
25 adherence to modern design codes. We believe that

1 the risk of a vessel of the type that would be
2 installed here would be more like one in a
3 million.

4 With that, I'd kind of like to reflect
5 on some of the discussion about double-tank
6 failures. In the vast majority of cases, tank
7 failures are independent events. They occur
8 because of corrosion, improper maintenance, or
9 some other factor that is independent. So what
10 that means is to get the probability of both tanks
11 failing, you would have to look at the probability
12 of a common-mode event that would compromise both
13 tanks and the probability of spontaneous failure
14 of both due to these independent factors.

15 It's my belief that that risk would be
16 very much below 10^{-6} , perhaps two or three or some
17 magnitude below that. So staff believes that
18 basically, all three estimates of concentrations
19 of ammonia from accidental release grossly
20 overestimate what would actually occur if an
21 accidental release due to these very unlikely
22 events did occur. We, therefore, cannot support
23 Mr. Radis's conclusion regarding significance of
24 the impacts, of potential impacts or the need for
25 additional mitigation.

1 Q Now, Mr. Tyler, let me interrupt you a
2 second. I thought I heard you say two different
3 things in your testimony. I think you were making
4 the point, first off, about the inability of the
5 temperature of the aqueous ammonia in the tank
6 deviating very much under different weather
7 conditions, I thought I heard you say no more than
8 five percent --

9 A No more than five degrees.

10 Q Okay. So I think the point is that
11 under -- Could you just restate that, please.

12 A Under any reasonable condition in
13 Hunter's Point, I would not expect -- I looked at
14 the ambient temperature data, the average ambient
15 temperature data, and I would not expect the
16 temperature, the average temperature of the
17 aqueous ammonia to be more than 65 degrees at any
18 time.

19 Q Okay, thank you.

20 A Which would mean it would be below
21 atmospheric pressure.

22 There was another issue raised about the
23 ammonia-on-demand system, and staff does not
24 concur with that recommendation for a couple of
25 reasons. One is the ammonia-on-demand system has

1 not been shown to be commercially feasible for a
2 project of this size. I would not debate that
3 it's probably technically feasible as a
4 technology, but I do believe it would impose risk
5 of lower reliability on the facility.

6 Further, I would point out that in
7 looking at transportation of various hazardous
8 materials, it's good to realize that the
9 statistics may not represent exactly what people
10 may think they're representing. If you look at
11 Lees's data, which we relied upon for accident --
12 for fatalities associated with accidents involving
13 haz mat carriers, you find that, in fact, the
14 fatality rate for accidents involving releases are
15 virtually identical to the fatality rates for
16 accidents not involving releases, which, in
17 effect, means that the vast, vast majority, nearly
18 all of the fatalities associated with haz mat
19 transportation occur in the accident itself, from
20 injuries of the collision, caused by the
21 collision, not by release of materials.

22 In that regard, the transportation of
23 urea to the facility would basically increase the
24 number of trucks per week from 5 to 8.7 trucks per
25 week. That's roughly a 74-percent increase in the

1 amount of truck traffic to implement this
2 technology. Realizing that nearly all of the
3 fatality rates associated with these types of
4 transports are from accidents, basically imposing
5 this technology may actually increase the risk of
6 fatality for the public.

7 Q All right, thank you. Now, have you
8 reviewed the prepared testimony of Mr. Radis?

9 A Yes, I have.

10 Q Regarding other transportation risks of
11 hazardous materials?

12 A Yes. Mr. Radis raises the concern that
13 transportation of aqueous ammonia to the site
14 poses an unacceptable risk, a significant risk of
15 public impact. He then recommends additional
16 mitigation to reduce this risk. On page two
17 Mr. Radis estimates that staff failed or states
18 that staff failed to consider the entire route.

19 Q I'm sorry, that's page two of what?

20 A Of his prepared testimony.

21 Q Okay, thank you.

22 A However, staff did consider the entire
23 route by first considering that there is an
24 existing regulatory program administered by the
25 federal government through the Department of

1 Transportation. This program is generally
2 accepted as being effective in reducing the risks
3 associated with all types of hazardous materials
4 shipments to acceptable levels.

5 Staff has reviewed the safety record for
6 hazardous materials and finds no deficiencies in
7 the program. These regulations require special
8 licenses, training of drivers, as well as special
9 design requirements for high-integrity vehicles.
10 Staff disagrees that CEQA requires the evaluation
11 of the entire route, as CEQA clearly allows staff
12 to rely on existing regulatory programs in the
13 absence of specific concern by our agency
14 regarding the effectiveness of such programs.

15 Staff also finds that specification of
16 the entire route over the life of the project
17 would require a degree of speculation not required
18 by CEQA. In other words, where do we define the
19 entire route? Do we go back to ships entering the
20 channel in Sacramento, the deep-water channel,
21 delivering ammonia to the storage tank there, then
22 the distribution to numerous ammonia suppliers
23 throughout the Central Valley?

24 It's just almost impossible to
25 determine, over the life of the project, what the

1 routes may be. And, as we said, we believe that
2 the existing programs are sufficient for
3 transportation on major highways in California.

4 On that same page, under the first
5 bulleted item on page three, Mr. Radis asserts
6 that we did not address cumulative impacts for
7 transportation risk. And in support of that, he
8 argues that the South Coast Air Quality Management
9 District, in adopting their regulations requiring
10 SCR retrofits on facilities in the Los Angeles
11 Basin looked at all transportation; however, I
12 think we need to realize that was a regulation
13 requiring installation and transportation of
14 ammonia to numerous facilities throughout that
15 basin.

16 This decision is relative only to this
17 case, so there is no basis, we're not making a
18 decision in this proceeding regarding
19 transportation of ammonia throughout California to
20 power plants. We're considering the implications
21 of this project. And so we don't believe that
22 that argument is appropriate.

23 On page two under bulleted item
24 Accidents and Spills, Mr. Radis states that there
25 have been accidental releases of aqueous ammonia

1 in transportation in contradiction of staff's
2 testimony. Staff reviewed the national response
3 database again, after reviewing Mr. Radis's
4 testimony, and found only one release in
5 California which actually occurred during transfer
6 operations at a water treatment facility.

7 What that means is basically they were
8 already inside a facility and they were
9 transferring the ammonia in some manner inside the
10 facility and still ended up reporting it to this
11 database. So it didn't occur as a result of
12 transportation, it occurred as a result -- and I
13 would point out that we've incorporated provisions
14 to deal with that which are not common at every
15 facility, which is the requirements for a diked
16 area under the truck, which we believe would catch
17 any material that was lost as a result of a
18 transfer, an error during transfer operations.

19 One other point I would make with regard
20 to the discussion of spills occurring outside the
21 transfer area is that we review the designs of
22 these facilities before the applicant is allowed
23 to deliver ammonia to the facility, and we would
24 look at those very issues. The points of hookup
25 for ammonia on the truck are on the sides as a

1 general rule. I don't recall ever seeing one that
2 was at the back or front of the truck.

3 And the hookup facilities for the tank
4 are generally at the middle to preclude -- at the
5 middle of the transfer area, just to preclude
6 that. The hoses would generally be too short to
7 allow them to do anything, to allow them to
8 deviate in a way that would allow the truck to
9 have a spill that was outside the containment
10 area. Those are all the kinds of things that we
11 look for in their management plan and in their
12 design of the facility.

13 On page two under bulleted item
14 Probability of Fatalities, Mr. Radis states that
15 "Staff's reliance on approach used by Davies and
16 Lees to assess probability of fatality assuming a
17 release is inappropriate." It is widely
18 recognized that accidental releases almost never
19 cause the level of impact that's predicted by
20 worst-case modeling. This is because several
21 factors must occur concurrently to the release in
22 order to result in impacts.

23 For example, receptors must be present
24 at the time of the release and in an area downwind
25 of the release. Potential for poor dispersion

1 must occur at the time of the release, and
2 receptors must be overcome before they can escape
3 the effects of the release.

4 Mr. Radis's analysis fails to address
5 these factors effectively. While this analysis
6 addresses probability of release and probability
7 of pessimistic dispersion, it does not address
8 wind direction that usually is nearly random under
9 F stability and low wind speeds. Thus, his
10 analysis assumes an area affected that grossly
11 overestimates the population potentially exposed.
12 Staff has found that this factor alone can reduce
13 probability of exposure by an order of magnitude.

14 In other words, if you assume just an
15 area encompassed by the maximum concentration and
16 you don't take into account where the wind is
17 blowing at the time of the accident, you sweep
18 that whole area, you encompass a much larger
19 population than could actually exist.

20 Estimation techniques aside, it should
21 be recognized that the actual level of injury and
22 fatality associated with hazardous materials
23 transport are very low, and for aqueous ammonia
24 virtually nonexistent. For the period between
25 1994 and 1998 there were 33 fatalities from all

1 types of haz mat shipments. It should also be
2 noted that statistics from accidents show that
3 nearly all fatalities are the result of injuries
4 that occur in the accident itself and not a result
5 of the materials being released.

6 The data presented by Davies and Lees
7 indicates that the average number of fatalities
8 per accident for non-release accidents is
9 virtually identical to that when there is a
10 release. This record does not support the level
11 of risk postulated by Mr. Radis's estimates of
12 risk.

13 On page three under bulleted item
14 Probability of Potential Injuries, Mr. Radis
15 states that "The staff's analysis is silent on
16 injury and focuses on risk of fatalities." While
17 this statement is correct, it is not an oversight.
18 Staff has found that the definitions that are used
19 to constitute injury are so poorly defined as to
20 make the data almost useless.

21 One incident that I looked at had listed
22 dozens of injuries as a result of people taking
23 their children to the hospital just to be checked
24 out -- They were considered admissions -- and
25 there were no injuries at all. None of them had

1 any kind of problem at all. They were all
2 immediately released after being checked out. The
3 parents were concerned. The release that I was
4 looking at actually caused concentrations that
5 were detectable at a school, and all the parents
6 were concerned, so they took their kids down to
7 the hospital to be checked out, but those were all
8 counted as injuries.

9 Clearly, when we talk about the kinds of
10 fatality probability estimates that we're using
11 here, if we were using injuries, we would
12 generally have a higher criteria, perhaps ten-fold
13 higher. One of the things that I would point out
14 is for that very same set of data on accident
15 statistics for hazardous materials shipments, the
16 number of injuries is about ten times as high as
17 the number of fatalities. The reason that most
18 people use fatalities is simply because the number
19 is much, much clearer and much, much better
20 defined.

21 There is a relatively, I would say
22 fairly constant ratio or you would expect that the
23 number of injuries would be larger than the number
24 of fatalities in any accident, and so you're
25 capturing basically the same data by using

1 fatalities. It's just a much more definite, much
2 better defined way of doing analysis.

3 This is actually kind of clearly
4 demonstrated by Mr. Radis's own analysis. He
5 misinterpreted staff's use of the 75 ppm exposure
6 criteria as a threshold of injury when, in fact,
7 we interpret that as a de minimis criteria. In
8 other words, we believe it precludes any potential
9 for injury, even in the most sensitive
10 individuals. Granted, there would be some degree
11 of irritation, inconvenience, and discomfort, but
12 there would be no injury as we would define it by
13 the FN curves that are typically used.

14 Staff also believes that one-time
15 exposure to 150 ppm, as recommended by EPA,
16 likewise poses no risk of injury, except possibly
17 for the very most sensitive members of the general
18 population. In reviewing the two criteria, we
19 looked at the NAS and NRC data, and they indicated
20 that 75 ppm could -- they could not preclude the
21 possibility that 75 ppm may have an adverse effect
22 on the very, very most sensitive segments of the
23 population. So someone, in other words, that's
24 very chronically ill, perhaps in a hospital.

25 We deal with that by looking at those

1 specific locations to make sure that we're not
2 exceeding those kinds of exposures at hospitals or
3 convalescent homes, those kinds of places.

4 Mr. Radis's analysis fails to identify
5 or reflect the portion of the potentially exposed
6 population that might be injured or affected by 75
7 ppm or 150 ppm concentrations of ammonia. Staff
8 would use the IDLH of 300 ppm as the lowest
9 exposure level that would impose a risk of injury
10 on most members of the general population. That
11 level of exposure, generally most healthy
12 individuals would recover completely, but their
13 ability for self-rescue could be seriously
14 impaired.

15 So if they were in an area where that
16 kind of an exposure occurred, they could not get
17 themselves out of the area. So that's one of the
18 primary criteria we would use. And that would
19 impose some risk of real injury. So that's our
20 interpretation of that data. But when you draw FN
21 curves, as Mr. Radis has for 75 ppm, you get a
22 much different answer than you do for 300 ppm or
23 for fatalities.

24 Based on our review, we find that
25 Mr. Radis's analysis overestimates the risk

1 associated with aqueous ammonia transportation.

2 We conclude that it also is inconsistent with the
3 actual statistical record associated with impacts
4 from aqueous ammonia transportation. Based on
5 this, staff rejects Mr. Radis's recommendation
6 regarding potential for significant impact and the
7 need for further mitigation of any type.

8 That concludes my testimony. You had a
9 couple --

10 Q All right, and I'm not going to let you
11 off quite that easily.

12 A Okay.

13 Q I just have a couple other questions.

14 A Okay.

15 Q Do you have a copy of Mr. Radis's
16 testimony?

17 A Yes, I do here somewhere.

18 Q I do, so why don't I just let you look
19 at my copy.

20 A Here it is right here.

21 Q Okay.

22 A Yes.

23 Q And could you turn to page five, please.

24 A Mm-hmm, page five of the first --

25 Q Of the testimony itself.

1 A Okay. That's this page?

2 Q No, it's page five of the actual pages.

3 A Okay.

4 Q Not of any attachment, just page five.

5 A Okay.

6 Q And there Mr. Radis makes a number of
7 recommendations for mitigation measures.

8 A Okay.

9 Q And could you -- I believe he makes
10 four -- and could you give me your thoughts, your
11 comments, please, on the feasibility and the
12 appropriateness of those four recommended
13 mitigation measures.

14 A The construction of a subsurface ammonia
15 tank could be feasible. It would I believe impede
16 maintenance efforts on the tank, inspection
17 efforts, that sort of thing. It also would still
18 require use of some sort of a sump. Clearly, the
19 largest risk is some sort of human error during
20 the delivery operations. So we would still have a
21 sump that produced virtually the same impacts that
22 we face now which staff doesn't believe are
23 significant.

24 Construction of a double-walled tank is
25 feasible but, again, would still require some sort

1 of a catchment basin for the vehicle itself, which
2 is really probably the most important mitigation
3 measure. Because that's the highest probability
4 of occurrence is some sort of release due to error
5 during delivery.

6 Use of -- I guess that's the third item,
7 "However, ammonia vapors would still" --

8 Q Take a moment to read it to refresh your
9 recollection.

10 A Okay. That one suggests a requirement
11 for a weaker ammonia solution, 19 percent. That
12 would certainly reduce potential exposures.
13 Again, we don't currently believe they are
14 significant, but they would in the event of an
15 accident reduce potential exposures.

16 Q Is that a feasible mitigation measure?

17 A Yes, it's feasible. As a matter of
18 fact, we have had projects that proposed use of
19 19-percent ammonia. But I would also point out,
20 again, 19-percent ammonia would result in a 30-
21 percent increase in truck traffic as well. So,
22 again, the accident statistics would catch up with
23 you and, quite frankly, in light of the low risks
24 associated with any injury or almost no
25 possibility of fatalities, I would question the

1 efficacy of that in that light.

2 Q We believe, with regard to four, that
3 existing --

4 HEARING OFFICER VALKOSKY: Excuse me,
5 Mr. Tyler --

6 THE WITNESS: Mm-hmm?

7 HEARING OFFICER VALKOSKY: -- just to
8 go, item three on Mr. Radis's testimony also
9 refers to a water suppression system?

10 THE WITNESS: Yes, that's feasible, but
11 also, we looked at that for anhydrous ammonia, and
12 the amount of water that has to be sprayed in the
13 air is -- it would be very difficult. It would
14 require a very large storage tank because you
15 basically have to have water spray in virtually
16 every direction to capture downwind
17 concentrations, at least for anhydrous ammonia.

18 For aqueous ammonia it may be somewhat
19 easier to knock it down because it wouldn't leave
20 as rapidly, so you could actually confine it in
21 closer. But as concentrations get as low as they
22 probably would or as they would from this type of
23 facility with an underground sump, it would
24 require an awful lot of water to reduce the
25 concentrations much at all.

1 Q Okay, thank you.

2 COMMISSIONER PERNELL: Does it matter
3 whether it's reclaimed water or does it have to be
4 potable water?

5 THE WITNESS: No, water basically --
6 ammonia has a very, very large affinity to
7 dissolve in water. So if you have any free
8 ammonia in the air and you have water available,
9 the ammonia wants to attach itself to the water.
10 So it tends to scrub the ammonia out of the
11 atmosphere. So it doesn't matter whether it's
12 dirty water or clean water, it will all work the
13 same way.

14 Again, the dirty water would have --
15 However, I would point out one thing about having
16 reclaimed water. It would at least have to be
17 free of minerals and particulates, because to be
18 effective the spray would have to be a very, very
19 fine mist and a lot of it. And so you're going to
20 have to force this water through very fine
21 orifices to get it to form that kind of mist, and
22 any impurities in the water are likely to cause
23 maintenance problems with that type of equipment.

24 With regard to four, we believe that the
25 existing regulations do require special training

1 and special license for drivers. And, in fact,
2 for aqueous ammonia will require haz mat certified
3 drivers. I would not argue or recommend against
4 requiring use of the fertilizer institute
5 requirements. They are probably somewhat better.

6 So that's feasible, it would probably be
7 effective, and I don't see any downside.

8 BY MR. WESTERFIELD:

9 Q I think that's it.

10 A Okay.

11 Q Okay. Then to summarize --

12 HEARING OFFICER VALKOSKY: Could I
13 interrupt you for one second?

14 MR. WESTERFIELD: Oh, certainly.

15 HEARING OFFICER VALKOSKY: For
16 transportation methods, I have a couple other
17 measures that Mr. Radis has identified, and since
18 we're on it I'd like to finish it up.

19 One is improved inspection and
20 maintenance of the delivery vehicles.

21 THE WITNESS: I don't know exactly what
22 he's asking for there. Certainly, improved
23 inspection and maintenance of vehicles would
24 certainly tend to reduce accident rates; how much
25 I really couldn't say. I would note that haz mat

1 carriers are getting a great deal of scrutiny
2 these days from the highway patrol so they get
3 inspected quite frequently as it is, but I
4 wouldn't see anything infeasible or outrageously
5 expensive associated with some sort of a program,
6 but it isn't defined here.

7 HEARING OFFICER VALKOSKY: Right. So
8 you would need a defined program.

9 THE WITNESS: Yes.

10 HEARING OFFICER VALKOSKY: Okay.

11 COMMISSIONER PERNELL: Can I follow up
12 on that? The vehicles that transport the ammonia,
13 do they -- they're not the applicant's vehicles,
14 they are a -- I've assumed that they either
15 transportation or ammonia company vehicles.

16 THE WITNESS: That's correct.

17 COMMISSIONER PERNELL: So when you talk
18 about increased maintenance of the vehicles, now
19 we're suggesting that the company that owns the
20 vehicles do increased maintenance; is that
21 correct?

22 THE WITNESS: That's correct.

23 COMMISSIONER PERNELL: Okay.

24 HEARING OFFICER VALKOSKY: Okay, and --

25 THE WITNESS: And I would just point out

1 very quickly that the accident statistics also
2 show that the accident rates for those types of
3 carriers, for companies that own their own
4 vehicles that are involved in bulk delivery of
5 hazardous materials is dramatically lower than
6 general carriers, like the trucks you see going
7 down the highway every day. They have much, much
8 higher accident rates and they can carry
9 containers of hazardous materials.

10 So when you look at the overall
11 statistics, you need to reflect that as well. So
12 they have a very, very -- even a better record
13 than general haz mat transportation.

14 HEARING OFFICER VALKOSKY: And is your
15 opinion that specifying use of the MC 307 style
16 tanker adequate in terms of trailer design and
17 trailer integrity?

18 THE WITNESS: Yes. That's a heavy-duty
19 high-integrity stainless steel heavy-wall bulk
20 transport tanker for caustic materials. So
21 stainless steel tends to be very, very resistant
22 to impact, and it also doesn't have a trailer,
23 which the trailers tend to be somewhat more
24 problematic.

25 So the MC 307 is really probably, for

1 liquid bulk transport is the most effective
2 vehicle that we know of.

3 HEARING OFFICER VALKOSKY: Okay. And
4 lastly, the weekend daytime or holiday deliveries?

5 THE WITNESS: In other words, not having
6 deliveries on weekends, holidays or --

7 HEARING OFFICER VALKOSKY: No, limiting
8 deliveries to weekend, daytime weekends or daytime
9 holidays, as I understand it.

10 MR. WESTERFIELD: Is the assumption that
11 traffic in San Francisco is less on the weekends?

12 HEARING OFFICER VALKOSKY: I don't know
13 what the assumption is, I'm merely trying to
14 phrase what I understand the suggested mitigation
15 is.

16 THE WITNESS: I think that would require
17 some more analysis to really pin down. Typically
18 what I can say is daytime deliveries would tend to
19 reduce dramatically the probability of F stability
20 conditions and low wind speeds.

21 Normally, F stability is with no solar
22 insulation, so nighttime or early morning or after
23 sunset. So the conditions that lead to really
24 poor dispersion generally occur not during the
25 daytime. They occur either in the early evening,

1 early morning or nighttime. So you would avoid
2 those, obviously. Any other stability class
3 dramatically reduces downwind concentrations in
4 the event of a release. So that would have some
5 effectiveness.

6 With regard to weekends and holidays, I
7 really don't know in the absence of data from
8 accident rates whether those would be higher or
9 lower or whether those would preclude exposures.
10 It may be that having people home at the time an
11 accident occurred could affect the results either
12 way.

13 So I don't know, it would depend on
14 where the impact occurred. If it occurred in a
15 business district, then it would probably be good
16 to have the accident occur on a weekend rather
17 than a weekday, but if it occurred near a
18 residential area, it would probably be better to
19 have it occur during a weekday.

20 HEARING OFFICER VALKOSKY: Okay.
21 Statistically speaking, is it fair to conclude
22 that there is a lower risk of a transportation
23 accident during daylight hours as opposed to a
24 non-daylight hours?

25 THE WITNESS: I would say probably yes,

1 because of the improved visibility and that sort
2 of thing.

3 HEARING OFFICER VALKOSKY: Okay, thank
4 you.

5 Please continue, Mr. Westerfield.

6 MR. WESTERFIELD: I'm not going to risk
7 a similar question now, but I am going to end with
8 the following.

9 DIRECT EXAMINATION (RESUMED)

10 BY MR. WESTERFIELD:

11 Q Are you familiar with several
12 modifications to conditions of certification
13 proposed by the City of San Francisco?

14 A Yes.

15 Q And I can't quite remember where those
16 are --

17 HEARING OFFICER VALKOSKY: In Ms. Cone's
18 testimony, there's one to haz two.

19 MR. WESTERFIELD: Thank you.

20 THE WITNESS: It's Exhibit C.

21 MR. WESTERFIELD: Of Ms. Cone's?

22 THE WITNESS: Yes.

23 MR. WESTERFIELD: Oh, I'm sorry, that's
24 a Mirant --

25 HEARING OFFICER VALKOSKY: Page four of

1 Ms. Cone's testimony.

2 MR. WESTERFIELD: Oh, now I see it,
3 thank you.

4 BY MR. WESTERFIELD:

5 Q Do you have any objection to that
6 proposed modification?

7 A No. Matter of fact, our conditions of
8 certification require that an RMP be prepared, and
9 it would have to be in accordance with the
10 regulations of the Health Department.

11 COMMISSIONER PERNELL: Could you define
12 an RMP for the record.

13 THE WITNESS: Risk management plan.

14 COMMISSIONER PERNELL: Risk management.

15 THE WITNESS: That's required under
16 California law and it's a delegated federal
17 program, so basically this requires a risk
18 analysis. It doesn't necessarily require changes
19 to the facility, and so it's basically an analysis
20 to demonstrate what the risks are, and it's
21 required by law so I would not have any problem
22 with that.

23 BY MR. WESTERFIELD:

24 Q All right, thank you. And there are two
25 other proposed modifications of COCs in the back

1 of Mr. Lee's testimony, Richard Lee's testimony.

2 A Yes.

3 Q It would be a modified haz mat three.

4 A I believe our condition already requires
5 the review of the Health Department. The only
6 concern I have is the requirement for approval by
7 the Health Department, and the objection there is
8 that we have had some problems with obstruction of
9 our process as a result of allowing approvals. So
10 basically what the attorneys have told me in
11 review is that we have no authority to relinquish
12 our jurisdiction over the project, and that's
13 effectively what allowing that approval by another
14 agency does, because they can actually preempt our
15 process by that approval.

16 So other than that, I have no problems
17 with the changes.

18 Q Well, I just -- One last question.
19 Regardless of the reason, do you object to the
20 last requirement for the approval of the City of
21 San Francisco, as specified in this proposed
22 modification?

23 A Yes, I would object to the word
24 "approval" only. The rest of the change is
25 completely okay.

1 MR. WESTERFIELD: Thank you.

2 That's all the questions we have on
3 direct, thank you.

4 HEARING OFFICER VALKOSKY: Okay. Just
5 to, again, follow this up, Mr. Radis also proposes
6 various changes to the conditions of
7 certification. Mr. Tyler, are you familiar with
8 those?

9 THE WITNESS: Yes. Is that the ones we
10 just went through, or is that --

11 HEARING OFFICER VALKOSKY: No. These
12 are ones which appear as Exhibit D on pages seven
13 and eight of Mr. Radis's testimony.

14 THE WITNESS: Okay. The first one is to
15 haz seven would replace haz two through six. Yes,
16 my objections to that are what I've already
17 basically stated. I think that the urea-based
18 system imposes a significant business uncertainty
19 because it has not been shown to be commercially
20 reliable on a plant of this size, so it would
21 impose some real economic and business risk on the
22 applicant, as well as the fact that it would
23 increase the number of shipments and, in my
24 opinion, would actually produce a higher
25 probability of fatalities occurring.

1 HEARING OFFICER VALKOSKY: Okay, fine.
2 Just continue with the conditions, please.

3 THE WITNESS: Okay. Haz three:
4 Provided that all of these were better specified,
5 I don't see anything there that -- We discussed
6 the California Fertilizer Association's training.
7 I think that as long as they can get a supplier
8 that would agree to do that, I don't see any
9 problem with that.

10 Implement vehicle inspection maintenance
11 program: Again, we're talking about a third
12 party. They would have to make some sort of
13 contractual agreement with the supplier, and there
14 would have to be some sort of specificity about
15 what that program should be, and in the absence of
16 that, I would say as long as it's reasonable that
17 would be fine.

18 Limit ammonia deliveries to the site to
19 daytime, weekends, and holidays: We discussed
20 that earlier. I would say probably daytime
21 deliveries would reduce the risk somewhat, but
22 again, we haven't identified any significant
23 impacts, so I don't know if it's really necessary.

24 Develop and implement transportation
25 emergency response plan: Again, that would be

1 something that would have to be implemented by the
2 transport company, and I would point out that
3 they're pretty well trained already on how to
4 respond. And actually, the reality is that what
5 most jurisdictions want is they want drivers not
6 to take their own actions, they want them to call
7 in the people that -- the haz mat team from the
8 local jurisdiction to help respond to it. In
9 other words, they don't want a lot of time lost
10 while someone is trying to address something. But
11 I think to the extent that it's a reasonable
12 emergency response plan and the transport company
13 is willing to go along with it, I don't see any
14 problem with that.

15 Again, the word "approved," since it
16 would preclude our jurisdiction, I would object
17 to, so the word "approved" would need to be
18 removed.

19 Haz four: To be quite frank, as far as
20 burying the tank, I would argue that, again, we
21 would still have to have the containment for the
22 truck delivery between the tank and the truck, so
23 we really wouldn't change the risk profile, really
24 the dominant risk is the release between the truck
25 and the tank. The API 620 code to seismic four

1 and ANSI case 61.1, we put that in there so they
2 have the option to use either one would be for
3 anhydrous ammonia, so that is such an overdesign
4 that I can't imagine the need for anything else,
5 double-walled or otherwise, for aqueous ammonia.

6 The 620 tank having some sort of double
7 wall would be okay, but I don't feel is really
8 necessary. Again, the failure of the tank is
9 much, much less likely than a spill between the
10 tank and the vehicle during delivery.

11 Haz six: Again, the word "approved"
12 needs to be removed. I think this reads exactly
13 the same as the condition we already have. We've
14 specified a route in our condition haz six, so the
15 only difference is it appears to be the approval.

16 The one thing I do note is I went down
17 there today and 23rd Street doesn't go into the
18 plant, it's actually -- you go past 23rd Street,
19 and in between 23rd and 24th you turn into the
20 plant, so we might want to change that. So I
21 don't know how you'd specify it, but 23rd Street
22 is a dead end that goes down the side of the
23 plant.

24 HEARING OFFICER VALKOSKY: When you say
25 change it --

1 THE WITNESS: I don't know what you'd
2 say there. I'd say I guess to Cesar Chavez Street
3 to Third Street to the plant entrance.

4 HEARING OFFICER VALKOSKY: Okay. Now,
5 how about in the condition of certification?

6 THE WITNESS: It's the same exact
7 problem.

8 HEARING OFFICER VALKOSKY: Okay. Right,
9 so we could look forward to a submission from
10 staff?

11 THE WITNESS: Yes, modifying that.

12 HEARING OFFICER VALKOSKY: Thank you.

13 MR. WESTERFIELD: When can we get that
14 to you?

15 HEARING OFFICER VALKOSKY: That's just
16 what I was going to ask you.

17 MR. WESTERFIELD: We'll get it to you by
18 next week, if that's all right.

19 HEARING OFFICER VALKOSKY: Next week,
20 yes.

21 COMMISSIONER PERNELL: Who laid out the
22 original route?

23 THE WITNESS: I don't know whether --

24 COMMISSIONER PERNELL: Or did everyone
25 lay out their own?

1 THE WITNESS: They did lay out some
2 options, and we finally settled on that one. It's
3 just somehow, I think somebody thought they were
4 turning down 23rd Street for whatever reason when
5 they went in that plant, and I don't know who that
6 was, whether we copied it from somebody else,
7 or --

8 COMMISSIONER PERNELL: Okay.

9 THE WITNESS: -- but I went out this
10 morning and went down 23rd Street, and it goes
11 down the side, so I thought we might want to
12 correct that.

13 HEARING OFFICER VALKOSKY: So to be
14 specific, that would be revised language to
15 staff's proposed haz six, page 5.5.21?

16 THE WITNESS: Yes.

17 HEARING OFFICER VALKOSKY: Okay.

18 THE WITNESS: The final one is "Project
19 owners shall limit aqueous ammonia concentrations
20 to less than 20 percent by volume." Again, that
21 would reduce the vapor pressure, thus reducing
22 downwind concentrations. It does reduce it
23 significantly, as you can see. I don't know if
24 you looked at the charts in Mr. Radis's testimony,
25 but there is a vapor pressure chart on page six of

1 Exhibit C. And you can see that 20 percent at
2 most reasonable temperatures would produce very
3 low vapor pressures, and thus reduce downwind
4 concentrations.

5 But again, the risk of any sort of
6 injury at all, other than what I would say is
7 transitory, the way I would characterize 75 ppm is
8 a transitory significant irritation and discomfort
9 for a transitory period with complete recovery.
10 No injury whatsoever.

11 So in light of that, I don't think I
12 would want to impose a 30-percent increase in
13 truck traffic to reduce that risk, because of the
14 potential for fatalities associated with that.

15 HEARING OFFICER VALKOSKY: Okay, thank
16 you.

17 Mr. Westerfield, anything more?

18 MR. WESTERFIELD: No, that's all we
19 have. Thank you.

20 HEARING OFFICER VALKOSKY: Okay. I have
21 a few clarifications, Mr. Tyler.

22 THE WITNESS: Mm-hmm.

23 HEARING OFFICER VALKOSKY: It is my
24 understanding that a urea system is used at
25 Huntington Beach. Are you familiar with the

1 Huntington Beach project?

2 THE WITNESS: I am familiar with the
3 Huntington Beach project, but I am not aware that
4 they have actually operated the system or found it
5 to be commercially reliable. I would say that
6 that would be a good place to demonstrate whether
7 it is or it is not commercially effective.

8 HEARING OFFICER VALKOSKY: How large is
9 Huntington Beach?

10 THE WITNESS: You know, I'm not really
11 sure. Are they using this on the existing boiler,
12 or --

13 HEARING OFFICER VALKOSKY: You've
14 exhausted my depth of knowledge about Huntington
15 Beach.

16 THE WITNESS: Okay. Yes, I mean, I've
17 been there, I've seen the boiler. It's a fairly
18 good-sized boiler, I don't know what its capacity
19 is.

20 HEARING OFFICER VALKOSKY: Okay. Again,
21 just a convenience question. Certainly the
22 committee can find out from the decision.

23 Okay. In Mr. Radis's testimony, there
24 is a suggestion that staff needed to analyze the
25 cumulative effects in the sense that it relates to

1 the other projects certified by the Commission,
2 which use ammonia. Do you have an observation on
3 that?

4 THE WITNESS: Yes. Again, his basis for
5 that statement is that the South Coast Air Quality
6 Management District did an analysis of the effect
7 of all transportation of ammonia when they adopted
8 their rule requiring SCR retrofits. That rule in
9 effect required transportation of ammonia to many,
10 many facilities in the South Coast Basin.

11 So the action they were taking did
12 impose that entire action of transporting ammonia
13 to numerous facilities throughout that basin. The
14 action we're taking is related to only this
15 project. We're not trying to adopt a rule that
16 would require ammonia transportation throughout
17 the State of California.

18 HEARING OFFICER VALKOSKY: Right, that's
19 true, but again, how about from a cumulative
20 sense, we have certainly certified numerous plants
21 which use ammonia on an individual case-by-case
22 basis. Do you see a need, and at least for the
23 cumulative transport of ammonia, that we should
24 look at all of those plants together in a
25 cumulative sense, and the resultant transportation

1 impacts?

2 THE WITNESS: When we look at risk, keep
3 in mind usually when I think of cumulative effects
4 for haz mat, I'm thinking in terms of some group
5 of people being exposed to two risks that are
6 cumulative. Generally, these plants are not
7 located close enough to each other that they
8 impose risks on the same populations.

9 And so from that point of view, I don't
10 see the cumulative effect. Certainly, over the
11 population of California, use of ammonia does
12 increase risk somewhat; however, I believe that
13 the majority of that risk is associated with
14 transportation of ammonia, and that there are
15 numerous -- there is transportation of all types
16 of hazardous materials on highways, many of them
17 much more dangerous than aqueous ammonia, and
18 generally we accept those risks.

19 So from a cumulative standpoint, I don't
20 think individual power plants impose risks on,
21 superimpose risks on the same population. And
22 from the general standpoint of risk acceptability
23 for transportation I think that the existing
24 regulations already address that, have considered
25 that.

1 HEARING OFFICER VALKOSKY: Thank you.

2 On page 5.5-14 on the second, third, and fourth
3 line under your heading Cumulative Impact, you
4 basically state, "The projects that could
5 potentially contribute to cumulative impacts are
6 those located in the same geographic area of
7 influence, 'defined as within a one-mile radius of
8 the proposed power plant.'"

9 How did you achieve that one-mile-radius
10 measure?

11 THE WITNESS: Generally, even under
12 the -- even with transportation of, say, anhydrous
13 ammonia, you don't see effects at those kinds of
14 distances. So generally, the effects of an
15 ammonia release are confined to an area of
16 typically I would say something less than 2500
17 feet.

18 So the one mile is a conservative way of
19 saying, well, at 2500 feet maybe we could have
20 overlap of risks from another facility, but we
21 didn't see that there.

22 HEARING OFFICER VALKOSKY: Okay.

23 THE WITNESS: In other words, the same
24 population could be exposed to multiple risks and,
25 therefore, it could be cumulative.

1 HEARING OFFICER VALKOSKY: Okay.

2 COMMISSIONER PERNELL: So just for some
3 clarification, if there is a leak of steel, you're
4 saying that the effects won't go past or won't get
5 up to one mile?

6 THE WITNESS: Yes, and that's not -- in
7 this case they won't go past the fence line. And
8 even in projects where we've had anhydrous ammonia
9 in rural areas or in more remote areas, generally
10 significant risk is confined to the immediate
11 vicinity, and I would say within 2500 feet to
12 maybe a little more than that.

13 So to find a population that may be
14 affected by multiple risks, that one-mile radius
15 generally gives you a pretty good picture of
16 whether there are other facilities that are
17 cumulatively imposing risk from hazardous
18 materials handling.

19 COMMISSIONER PERNELL: All right. So
20 even if the wind is blowing, it won't blow the
21 fumes or effects of the ammonia?

22 THE WITNESS: No. Generally, as wind
23 speed increases, dispersion increases and
24 concentrations fall. So the conditions that
25 produce the maximum impact are generally F

1 stability, which occurs typically in the early
2 morning, at night, or in the evening, and very,
3 very low wind speeds. And the reason for that is
4 they don't -- the material doesn't mix into the
5 air as quickly under those conditions. So the
6 downwind concentrations tend to be higher.

7 It's somewhat dependent on the release,
8 but in general, those conditions produce, and
9 certainly for this type of material where you have
10 mass transfer from the surface of a pool, low wind
11 speeds produce the maximum impacts. And in this
12 case, we didn't see any concentration greater than
13 75 ppm at the fence line, based on our modeling,
14 and at the nearest receptor point, which is the
15 park near the power plant which, by the way, is
16 very, very run down and probably not used, but we
17 looked at the potential for impacts at that park
18 and found that they would be below 10 ppm at the
19 nearest receptor.

20 So we don't see any possibility of
21 impact from a release at this facility.

22 HEARING OFFICER VALKOSKY: Are you
23 familiar with the societal risk guidelines
24 mentioned in Mr. Radis's testimony?

25 THE WITNESS: Yes. As a matter of fact,

1 they're -- I've seen them several places.
2 Generally, we utilize them as well. Those are I
3 would say generally accepted guidelines. They've
4 been used by many countries throughout the world
5 for these types of risk analyses. Again,
6 generally most people rely on fatalities, because
7 it's more definite, easier to define, it's clear,
8 there is no ambiguity about what is a fatality
9 that resulted from a release.

10 And generally, the guidelines are that
11 you would accept a risk of up to ten fatalities of
12 10-5, up to a hundred fatalities of 10-6. And so
13 those are -- Below that, the risks are considered
14 de minimis. In other words, there is really no
15 need to reduce the risk further.

16 Above that still may be acceptable, as
17 long as mitigate to the extent that you can. In
18 other words, it's a grey area. Significantly
19 above that, then we start to see risks that are
20 clearly intolerable, and that would be, for
21 instance, a thousand fatalities at 10-4 or 10,000
22 fatalities at 10-5 would typically be numbers that
23 are used. So those are very large numbers.

24 It's very difficult to produce those
25 kinds of impacts from storage of the amounts of

1 materials that we're talking about at these
2 facilities.

3 HEARING OFFICER VALKOSKY: Okay, and how
4 do the -- Just refresh me, I'm sure you covered it
5 but I can't retain everything. How do the levels
6 viewed as de minimis under the societal risk
7 guidelines compare with the probabilities you've
8 calculated in your analysis?

9 THE WITNESS: Well, again, my big
10 problem with injuries is that you need to define
11 those. If you look at our testimony in Appendix
12 B, which was discussed somewhat before, under 64
13 ppm, which is very close, by the way, to the ANSI
14 guideline, and these are some of the same health
15 effects that they relied upon to reach the 75 ppm
16 criteria, I would point out these are the National
17 Research Council and the National Academy of
18 Sciences. These were very, very knowledgeable,
19 highly educated health professionals that
20 developed the guidelines.

21 We see things like most people would
22 notice a strong odor. That to me does not qualify
23 as an injury, under most people's definitions,
24 under the societal guidelines. Injuries are
25 things that cause permanent disabilities,

1 impairment, major hospitalization, loss of work
2 time, those are what constitute injuries under
3 those societal guidelines.

4 This kind of transitory effect doesn't
5 rise to that level. These are not injuries.
6 These are not harm to the individual. These are
7 transitory nuisance effects, basically. And
8 virtually everyone would recover completely after
9 exposure.

10 So in light of the very low risk of that
11 ever occurring, this is a very good balance. The
12 next level higher, IDLH starts imposing some real
13 possibilities of significant hospitalization if
14 someone can't remove themselves from the
15 concentrations, such as an infant or something
16 like that. It becomes very much more serious when
17 you get into those levels, so those would be what
18 we would use.

19 HEARING OFFICER VALKOSKY: Okay.

20 THE WITNESS: So what you define as an
21 injury becomes very, very important to doing those
22 FN curves.

23 HEARING OFFICER VALKOSKY: Thank you.

24 Do you have an opinion on the appropriateness of
25 the screen model as opposed to the RMP comp model?

1 THE WITNESS: The screen model is an
2 EPA-accepted model. EPA allows, under the RMP
3 program, the federal guidelines, that you can use
4 the comp model if you want to. The comp model
5 says that basically these are the impacts at the
6 point where you reach their exposure criteria. So
7 it tells everybody that within or outside of that
8 level, we believe your exposures are
9 insignificant. Above that, we may want to look at
10 it further or we may want to inform the public
11 that there is some level of risk.

12 The comp model does not allow you to do
13 the kinds of things that we really need to do in
14 this type of proceeding, which is look at various
15 different places. We couldn't define a receptor
16 at that park and use the EPA comp model. The comp
17 model is a very rough tool to try to decrease the
18 cost to industry of implementing this program.
19 And EPA does allow use of other models, and this
20 is an EPA-approved model, and it allows you to
21 take -- and the EPA also allows you to take into a
22 case passive mitigations. Over time staff has
23 imposed mitigations on the basis of them being
24 passive.

25 The containment, diked area, the gravity

1 flow of the material that is released from the
2 tank into a sump, the effect of gravity flow from
3 the dike, from the catchment basin under the
4 truck, all are passive mitigations which EPA would
5 allow you to take into account in your modeling.
6 Because they don't require any human being to do
7 anything, they don't require a motor to operate or
8 any piece of equipment to operate, they're
9 intrinsically available.

10 So if there is a release, it flows down
11 by gravity into a catchment, and then into a
12 covered area. And so you can't do any of that
13 with the comp model.

14 HEARING OFFICER VALKOSKY: So your
15 professional opinion is that the screen model is
16 preferable for use in this type of -- assessing
17 risks of this type of --

18 THE WITNESS: Yes, absolutely.

19 HEARING OFFICER VALKOSKY: Thank you.
20 Just a couple more. Are you familiar with the
21 applicant's revised analysis in table two of
22 Mr. Lague's testimony on page three of
23 attachment --

24 MR. WESTERFIELD: Table two?

25 HEARING OFFICER VALKOSKY: I'm not sure

1 which attachment it is. It's in the Revised
2 Aqueous Ammonia Off-site Consequence Analysis.
3 And on page three of that, there is a table that
4 we discussed earlier. Table two?

5 THE WITNESS: Mm-hmm.

6 HEARING OFFICER VALKOSKY: Titled
7 Maximum Predicted Ammonia Concentration.

8 THE WITNESS: Mm-hmm.

9 HEARING OFFICER VALKOSKY: Okay. Now,
10 did I hear you correctly earlier say that under
11 staff's modeling regimen, the actual level of the
12 fence line would be about 32 parts per million?

13 THE WITNESS: That's correct. That's
14 what our testimony I believe states.

15 HEARING OFFICER VALKOSKY: Okay. Now,
16 here I have a level of 68.2 ppm, although it's
17 under maximum. Is there any conflict between your
18 modeling figures and this one?

19 THE WITNESS: I think it's basically
20 assumptions. Like I pointed out, all of these are
21 really grossly overestimating. And I don't think
22 there's a conflict, I think it's just what we used
23 as inputs to model versus what they used as inputs
24 to model. They I think used a higher bulk
25 temperature for the ammonia, and that's what

1 produced the higher source term or the higher
2 emission rate from the freestanding pool.

3 But again, I would point out that in a
4 sump that's covered with small drain openings, the
5 mass transfer from the surface of that pool is
6 going to be driven by probably even less than
7 laminar mass transfer coefficient, more like
8 brownian diffusion from the top of the pool, which
9 is very, very slow. So I believe that any of
10 these models are overpredicting dramatically for
11 that situation.

12 Again, I think that this probably
13 overpredicts the average temperature of the fluid,
14 and thus increases vapor pressure or the vapor
15 pressure that's used in the modeling, therefore
16 increasing the rate of emission from the pool
17 surface. And I don't see a conflict, I simply
18 think it's a difference of inputs for the model,
19 whether you correct for the relative amount of
20 ammonia in solution and use a two-component model
21 versus a one, which, by the way, EPA has now
22 recognized as an appropriate approach. They do
23 recognize that a two-component model is
24 appropriate for mixtures like this.

25 HEARING OFFICER VALKOSKY: And that is

1 the modeling regimen that staff used.

2 THE WITNESS: Yes.

3 HEARING OFFICER VALKOSKY: Okay. Last
4 question. To your knowledge, is the 35-parts-per-
5 million level mentioned in the testimony of
6 Ms. Cone and possibly Mr. -- no, it's Mr. Lee, I
7 guess -- Ms. Cone and Mr. Lee, I'll cover it --
8 required for application under any law, ordinance,
9 regulation, or standard?

10 THE WITNESS: Only in the workplace.
11 And it would be allowed, you would be allowed to
12 be exposed to that every day for 15 minutes. You
13 would be allowed to be exposed to that, to a
14 concentration just below that for hours in each
15 day as long as the time-weighted average wasn't
16 above 25.

17 We would never allow that kind of an
18 exposure regimen at that level for the general
19 public. If we were looking at those kinds of
20 repeated exposures that were allowed day after day
21 after day, we would be looking at concentrations
22 down below 10 ppm.

23 HEARING OFFICER VALKOSKY: Okay. So
24 there is no legal requirement --

25 THE WITNESS: No, only in the workplace.

1 HEARING OFFICER VALKOSKY: Only in the
2 workplace, not at the project fence line in this
3 case.

4 THE WITNESS: Right.

5 HEARING OFFICER VALKOSKY: Thank you.

6 Cross-examination?

7 MR. CARROLL: No cross-examination from
8 applicant.

9 MS. MINOR: Okay.

10 CROSS-EXAMINATION

11 BY MS. MINOR:

12 Q Mr. Tyler, at times it appeared that you
13 were reading pretty quickly from a document. Is
14 that a modification of your testimony that you
15 intend to submit as an exhibit?

16 A No. Actually, I prepared that to keep
17 my summary on line, you know, basically flowing
18 quickly so I could get through it. And the other
19 parts of it were really meant to address the
20 comments or the testimonies that were received
21 from the City and County of San Francisco.

22 Q Okay. I know last night the CEC staff
23 filed supplemental testimony that was intended to
24 address testimony that had been filed subsequent
25 to its testimony, and it appeared that you were

1 doing the same thing tonight. And you actually
2 went through some of that testimony so quickly, to
3 the extent you have copies of it and we can put it
4 in the record, I think it would be helpful for
5 clarifying the record.

6 MR. WESTERFIELD: Jackie, what we did
7 last night was to prepare copies of modified
8 conditions of certification that we wanted to
9 write out because they are so important that we
10 get the language down exactly.

11 MS. MINOR: Okay.

12 MR. WESTERFIELD: I think what Rick was
13 talking about was his own notes that he was
14 referring to that allowed him to testify.

15 MS. MINOR: Well, if he doesn't intend
16 to submit it as an exhibit, we will proceed
17 without it.

18 BY MS. MINOR:

19 Q Okay. I'm going to be bouncing around a
20 bit, and actually I think this is one of these
21 situations where we want to spend a little bit
22 more time on our direct testimony than on your
23 cross-examination, and it's a little awkward
24 because you got to rebut in a very aggressive way
25 our testimony that has not been submitted in

1 direct as of yet. But let me go through and ask
2 you a couple of questions, okay?

3 A Sure, sure.

4 Q All right. If you would go to page five
5 of Mr. Radis's testimony, paragraph two on line
6 nine --

7 A Page five.

8 Q -- this is his recommendation that
9 double-wall containment be required.

10 A What line was that, again?

11 Q Starting on line nine, page five.

12 A Yes, okay.

13 Q He suggests, he recommends a double-
14 walled container, and he also lists a series of
15 recent CEC projects where the Commission has
16 required double-walled containment.

17 Are you familiar with these projects?

18 A Yes, I am.

19 Q Okay. Is it your understanding that
20 double-walled containment was, in fact, required
21 for these projects?

22 A Yes, what I would point out, though, is
23 some of those projects were anhydrous ammonia.

24 Q Okay. Which ones?

25 A I believe Delta was anhydrous ammonia,

1 High Desert was anhydrous ammonia, Sutter was
2 anhydrous ammonia, I'm not sure about Pectoria and
3 Los Medanos. Basically I can't recall anybody --
4 I take that back, I guess there have been
5 proposals to use double-walled containment for
6 aqueous, but generally when they used the double-
7 walled-contained tank, they incorporated that with
8 the diked area. So, in other words, they used the
9 double-walled containment as the sump for the
10 delivery area as well.

11 Most of them, though, were anhydrous,
12 and that's really the only way to mitigate that.
13 You can't do the same sort of mitigations as you
14 can with aqueous.

15 Q Are any of these power plants in densely
16 populated areas such as the proposed Potrero Unit
17 Seven?

18 A The Sutter facility is in a remote area.
19 High Desert is in a fairly unpopulated area. The
20 Delta facility is in a relatively low-density
21 population area. Los Medanos, I think that's the
22 one that's in Pittsburg. I think that one uses
23 aqueous. I can't be absolutely sure about it.
24 And that may have been the one that used a double-
25 wall containment with that as part of the

1 catchment for the truck.

2 And so I think that one may be in a
3 little -- I can't remember whether it's Delta or
4 Los Medanos. Those two are fairly close to each
5 other in the Antioch area, I believe.

6 Q And which of those did you believe is
7 aqueous?

8 A I'm trying to think now. Los Medanos --
9 I think Delta must be the one that is a -- Los
10 Medanos, I think, is the one that is anhydrous.
11 Delta -- One of them I believe is anhydrous and
12 one of them is aqueous. I can't recall which one.

13 Q Okay. Are you aware that the Bay Area
14 Air Quality Management District has promulgated a
15 role, the effect of which is resulting in the
16 conversion of many boilers in the Bay Area nine
17 counties to SCR?

18 A I'm not aware of that, but it doesn't
19 surprise me.

20 Q Okay. If there are local Air District
21 rules which have the effect of requiring SCR or
22 some comparable technology that is using ammonia
23 to reduce NOx, does that change your view as to
24 whether this Commission should consider the
25 cumulative effect of transporting, multiple

1 facilities transporting ammonia?

2 A No, I don't think so, because this
3 proceeding is about this facility, and the risks
4 that it imposes and whether those are acceptable.
5 Where I could see it may have some effect is by
6 example, and my personal belief is that if the
7 district imposed use of aqueous ammonia that that
8 would, in fact, significantly protect the public.

9 So I would think the same sort of
10 mitigations, perhaps they would impose SCONOX, I
11 don't really know what technology they would
12 impose.

13 Q So they're not imposing the technology,
14 they're requiring --

15 A The emission reduction.

16 Q -- the reduction in the NOx, right.

17 A Right. So from a cumulative standpoint,
18 again, I would focus on this plant and whether
19 there was another plant. And in effect, I think
20 we have addressed the cumulative issue in
21 considering Unit Three when it comes, when it is
22 required to do NOx control and have ammonia on
23 site, the other unit at Potrero.

24 Q So how have you considered the
25 cumulative effects of Unit Three?

1 A What I'm saying is when Unit Three is
2 actually required to use ammonia, I would expect
3 that that use of ammonia would be considered in
4 the context of the existing unit that we're
5 permitting that, either by us or whoever does the
6 analysis. If it's the local Air District, I would
7 assume they would look at, in their evaluation of
8 impacts, that facility as well, in the context of
9 what's already there.

10 Q But you did not consider the prospect of
11 retrofitting Unit Three as a part of your
12 cumulative analysis as you looked at Unit Seven.

13 A Not specifically. What I would say is
14 that I have no reason to believe, based on what I
15 know now about Unit Seven, that retrofit and
16 requiring SCR on the existing unit, would
17 substantially increase the risk to the public. It
18 would increase the number of transports to the
19 facility, and in that context it would increase
20 risk of traffic accidents and potential releases.

21 With regard to the discussion of the
22 multiple tanks, I don't think that's really
23 relevant. I think that the risk of multiple tank
24 failures is so low as to be comparable to a meteor
25 strike or something like that. I just don't see

1 it as a plausible scenario.

2 So from that standpoint, I don't believe
3 that the two facilities together would impose an
4 impact, but I didn't analyze it specifically in my
5 testimony.

6 Q Kind of comparable to the risk of a
7 plane going through the World Trade Tower, huh?

8 A Well, I --

9 UNIDENTIFIED SPEAKER: Or two of them.

10 MR. WESTERFIELD: Or a SCUD missile
11 going into the Potrero facility.

12 THE WITNESS: Yeah, and I think if we
13 want to discuss the issue of terrorism, what I
14 would point out is this is a bad target. There
15 are much, much better targets to produce impact
16 than doing something to this facility. This is a
17 low-risk material. Aqueous ammonia is not the
18 type of material that I would believe a terrorist
19 would target, because it just won't produce the
20 impacts that many others would.

21 I would think they would be smart enough
22 to go attack an anhydrous ammonia tank or a
23 chlorine tank or something of that type.

24 BY MS. MINOR:

25 Q Okay. If you would go to page 5.5-14,

1 the staff's testimony, and the section entitled
2 Cumulative Impacts -- Let me know when you've
3 found it.

4 A Yes.

5 Q Would you read that sentence that
6 begins, "Because," and I'd like just some
7 clarification about what actually was taken into
8 account.

9 A "Because there already exists a power
10 generating facility at the site, the risk of
11 hazards surrounding the transportation and use of
12 hazardous materials has already been addressed by
13 existing facilities in surrounding industries."

14 Q My question goes to whether or not that
15 statement takes into account the large quantities
16 of hazardous materials such as aqueous ammonia
17 that are currently not being used that will be
18 used if Unit Seven is licensed.

19 A What I would say or what my view on this
20 would be is that basically, this area, the
21 existing plant does already use significant
22 amounts of hazardous materials. Certainly, the
23 addition of ammonia would somewhat increase that
24 risk. The whole area surrounding the facility is
25 heavily industrial, and I would certainly expect

1 that there would be significant transportation of
2 hazardous materials in and about the area, such as
3 fuels, hydrocarbons, gasoline, propane perhaps,
4 those kinds of materials.

5 Q But this project does increase in a
6 significant way the level of hazardous materials
7 that are being transported to the site and stored
8 on the site?

9 A I don't know whether I would to
10 characterize it as significant. I think we'd have
11 to compare --

12 Q Well, there is a 20,000-gallon tank of
13 aqueous ammonia that currently does not exist that
14 will exist.

15 A That's correct.

16 Q Okay. And we're not sure about the
17 sulfuric acid and I think that that will be
18 clarified, and there are several thousand tons of
19 sodium hypochlorite I believe it is that currently
20 do not exist that will exist.

21 So did this statement take into account
22 the fact that there is, in fact, an increase in
23 the level of hazardous materials that will be both
24 transported and stored on the site?

25 A I would say yes, but not in the context

1 of quantities. What we generally look at is not
2 quantities of material that would be on site but,
3 in fact, risk imposed to the public. So what my
4 major emphasis would be is does the risk
5 associated with handling and transportation of
6 these materials significantly add to existing
7 risks in this community, and what our analysis
8 shows is that it does -- in fact, does not. The
9 risk levels are very, very low.

10 Q Did you write the environmental justice
11 statement that's included in the hazardous
12 materials testimony or was that written by someone
13 else?

14 A I was certainly involved in it and I've
15 reviewed it. I don't know -- I can't recall which
16 exact parts of it were changed by Alvin, but I
17 generally agree with what it says.

18 Q Okay. So this is your testimony --

19 A That's correct.

20 Q -- that there are no cumulative, that
21 there is no significant impact?

22 A Again, if there is no impact to anyone,
23 there is no impact to the environmental justice
24 community, and that's in effect what we're saying.
25 If we don't find a significant risk to anybody,

1 then we don't find a significant risk to that
2 community.

3 Q In that regard I may come back to that
4 point.

5 Your Appendix B, page 5.5-28, this is
6 Appendix B that is entitled Summary of Adverse
7 Health Effects of Ammonia.

8 A Yes.

9 Q I don't want to mischaracterize your
10 testimony, but I believe that it's your testimony
11 that when we look at the list of adverse health
12 effects within seconds at 64 ppm, you do not
13 consider these to be injuries.

14 A That's correct.

15 Q Okay. Do you have a view as to whether,
16 from a public health standpoint, these exposures
17 are likely to send people to local clinics and
18 hospitals?

19 A I believe this level of exposure could,
20 because of the discomfort that would be involved,
21 could cause concern on the part of the individual
22 for themselves or perhaps their children, and
23 result in them seeking a medical opinion of
24 whether they're okay.

25 Generally when people are exposed to

1 something like this, they don't know whether it's
2 carcinogenic, whether it's going to cause them
3 health effects 20 years from now or that sort of
4 thing, so they're very concerned. They don't
5 really understand that these are acute transitory
6 effects.

7 I would be concerned about these types
8 of effects if they were occurring repeatedly.
9 This is basically our attempt to evaluate
10 something to balance and focus our mitigation on
11 real issues. This level of exposure would not
12 impose an unacceptable risk on the public of any
13 kind of significant injury, if you understand what
14 I'm saying. It's transitory nuisance effects,
15 basically.

16 Q I do understand your testimony. What
17 I'm -- I'm trying to get a better handle on the
18 balance that the CEC staff is striking here. You
19 have a community that currently does not have --
20 You have a power plant that currently does not
21 store aqueous ammonia. This project will
22 interject a tank that stores 20,000 gallons. If,
23 in fact, SCR is approved for Unit Three, there
24 will be a second 20,000-gallon tank.

25 The community is concerned about aqueous

1 ammonia. And your testimony suggests that at 64
2 ppm, which is lower than the standard that you
3 believe should apply, these are potential health
4 risks. And we say to -- And in striking this
5 balance, you say to the community, this is a
6 hazard you currently don't have. We're going to
7 impose this hazard on you, and oh, by the way, if
8 there is a spill or a leak, you're going to suffer
9 these effects, but they're transitory, don't worry
10 about them.

11 And I don't know how you strike that
12 balance, particularly if you have read the
13 testimony of the City's witnesses and you already
14 look at the significant level of hazardous
15 materials that are in this community.

16 MR. WESTERFIELD: I have to object to --

17 BY MS. MINOR:

18 Q And I don't want to be a speech, but if
19 you can help me, tell me about the -- the question
20 goes to --

21 MR. CARROLL: I think we're getting
22 close to having to swear in a lawyer.

23 (Laughter.)

24 MS. MINOR: I will accept that this
25 time.

1 BY MS. MINOR:

2 Q But the question really, Mr. Tyler, goes
3 to how do you strike that balance? How did you --
4 We've heard lots of testimony from you today about
5 75 ppm and on and on and on and on. Tell me how
6 you struck this balance.

7 MR. WESTERFIELD: Okay, hold on, slow
8 down, slow down.

9 MS. MINOR: Okay.

10 MR. WESTERFIELD: Outside of the speech
11 issue, and it was a very good speech, mind you --

12 MS. MINOR: Thank you.

13 MR. WESTERFIELD: -- I think you went
14 ahead to characterize this witness's testimony in
15 a number of ways that really did not, he did not
16 testify to. For example, you said that he said
17 that these effects were health risks, he testified
18 -- You said that he testified there were health
19 risks. You said he testified there were health
20 hazards, and those are not things that this
21 witness said.

22 HEARING OFFICER VALKOSKY: Okay, so --

23 MS. MINOR: I don't believe I said that.

24 HEARING OFFICER VALKOSKY: Wait, excuse
25 me, so we don't --

1 MS. MINOR: I think that I'm
2 characterizing the appendix --

3 HEARING OFFICER VALKOSKY: Ms. Minor,
4 please --

5 MS. MINOR: I'm sorry.

6 HEARING OFFICER VALKOSKY: So we don't
7 get into competing unsworn testimony from lawyers,
8 I suggest you just ask Mr. Tyler a series of
9 questions.

10 MS. MINOR: Okay.

11 HEARING OFFICER VALKOSKY: For example,
12 you might want to start with are there adverse
13 health risks attributable to the ammonia
14 concentrations at the fence line, and follow it
15 along that way, okay?
16 BY MS. MINOR:

17 Q I'll adopt that question.

18 A These are certainly effects that people
19 would encounter at these concentrations. That's
20 what this data says.

21 Do they constitute injury? I would
22 argue they don't. Would they occur in the event
23 of every accidental release? Absolutely not. In
24 fact, what our analysis shows is that only under
25 the most pessimistic of conditions would we see

1 that level at the fence line. Again, there is no
2 one at the fence line. I've been at that facility
3 before, I've been there to source test it, I've
4 been there this morning to look at it again to
5 make sure that my memory was correct.

6 I really can't think of a reason that
7 anyone would be hanging around the fence at that
8 facility. The nearest location where a person
9 would be present would be that park.

10 So now we have to have an accidental
11 release from the tank, we have to have winds in
12 the direction of the park, and we have to have F
13 stability meteorology. Risk is really -- It's a
14 combination of probability and consequence, and
15 what I'm saying from a balance standpoint is that
16 this is a very, very, very low probability of
17 occurrence, and that the effects that someone
18 would encounter as a result of that level of
19 exposure are not sufficient at that level of risk
20 to be considered significant.

21 And I would argue that I'm in good
22 company on that in light of EPA's recommendation
23 to use 150. I would never accept exposure,
24 repeated exposures of 35 ppm, which is the regimen
25 that that criteria was derived under. And if I

1 were looking at exposures like that in the
2 workplace, I would come down with a number lower
3 than 75 ppm, because they are certain. They occur
4 all the time, they occur repeatedly, and they
5 impose risk of chronic effects on the individual
6 from repeated exposure.

7 So that's the difference.

8 Q Are you aware of any cases where the CEC
9 staff has recommended a criteria lower than 75
10 ppm?

11 A I can't recall us doing that. I
12 wouldn't say that it's never happened or that it
13 couldn't happen. If we were perhaps looking at an
14 acute care hospital or something like that where
15 we had people who basically are so severely
16 compromised that this level of exposure would be
17 potentially of concern, and recognizing that the
18 National Academy of Sciences said exactly the same
19 thing, that if you were talking about
20 significant -- if you were talking about people
21 being present that are compromised, in other
22 words, with chronic, COPD and things like that,
23 hospitalized on respirators, you probably would
24 reconsider this level of exposure.

25 But for the vast, vast majority of the

1 general public, even sensitive segments of it like
2 asthmatics, these would be transitory effects, not
3 without concern -- in other words, you would
4 certainly know you were exposed and there would be
5 some level of discomfort, but in light of the
6 probability of occurrence, they're not sufficient
7 to be considered significant. And that's why we
8 use that criteria.

9 Q In your discussion of the importance of
10 using fatalities as opposed to injuries, you noted
11 the inconsistency in determining whether injuries
12 with symptoms such as those that were listed in
13 Appendix B under 64 parts per million should be
14 considered an injury or merely a check-in.

15 My question is in a situation where you
16 have multiple people who show the symptoms that
17 are listed in Appendix B under 64 parts per
18 million, is it your view that a medical facility
19 should not treat that as an injury when people
20 come in with those symptoms?

21 A I think certainly, if people who were
22 exposed to this went to a hospital to be checked
23 out, I'm pretty certain that the doctors would
24 check them out. They would want to know what they
25 were exposed to. They would want to make sure

1 that, in fact, the effects were transitory and
2 that they did not have to provide treatment.

3 That would just be responsible medical
4 care. But I doubt that any of them would
5 hospitalize the individual or take any other
6 extensive type of medical treatment. In other
7 words, I don't think they would be repeated, I
8 don't think they would return to be reseen. I
9 doubt -- I don't think they would be prescribed
10 any medicine, I don't think they would be admitted
11 to the hospital under this scenario. I think they
12 would be checked out and released.

13 In your testimony on page 5.5-17, this
14 is a section of the testimony that includes the
15 responses to the public and agencies on the PSA.
16 Did you prepare that response?

17 A Actually, it was prepared by
18 Mr. Greenberg, but --

19 Q So it was prepared under his
20 supervision?

21 A That's correct. Now, which one are we
22 talking about, the first one or the second one?

23 Q The CCSFB(6)

24 A 6(B).

25 Q Yes.

1 A Okay, "The applicant should be required
2 to implement a new process of ammonia on demand,"
3 okay.

4 Q Yes. And if you would read the last
5 three sentences, I'd like to ask you questions
6 about that. "Staff has also reviewed the use of
7 dry and urea pellets as an alternative source of
8 ammonia for SCR. Staff has found that it is a
9 viable alternative; however, it has not been used
10 extensively in this country, nor on a scale of
11 this magnitude. However, if the Commissioners are
12 somehow dissatisfied with the use of aqueous
13 ammonia, this alternative is available for
14 consideration."

15 My question is what factors would the
16 Commissioners consider in determining whether urea
17 should be recommended for this project?

18 MR. WESTERFIELD: I object to that
19 question as it assumes that Mr. Tyler knows what's
20 in the minds of the Commissioners.

21 HEARING OFFICER VALKOSKY: That
22 objection is sustained, because it is a secret.

23 (Laughter.)

24 MS. MINOR: Okay. I can restate the
25 question if necessary.

1 HEARING OFFICER VALKOSKY: I think, and
2 correct me if I'm wrong, but it is my
3 understanding that what you're really looking for
4 is the viability of the alternative --

5 MS. MINOR: Yes, just --

6 HEARING OFFICER VALKOSKY: -- of the
7 urea.

8 MS. MINOR: Yes.

9 HEARING OFFICER VALKOSKY: I understand.
10 Why don't you go ahead.

11 BY MS. MINOR:

12 Q Tell me what factors should be
13 considered in assessing.

14 A Most importantly, if they view the level
15 of risk as -- First off, whose risk estimates they
16 believe are most correct, and then whether those
17 risk estimates subject the public to a significant
18 impact, pursuant to their definition of what a
19 significant impact is.

20 And then whether, in fact, they believe
21 that the risks associated with urea, either
22 positive or negative, are appropriate, and whether
23 they really provide a benefit in risk reduction.
24 And then finally, what does requiring that
25 technology mean in terms of the risk to the

1 developer and the reliability of the facility, in
2 terms of providing energy to the public.

3 Q You made a --

4 COMMISSIONER PERNELL: Excuse me,
5 Ms. Minor.

6 MS. MINOR: Uh-huh.

7 COMMISSIONER PERNELL: A question: If,
8 because this technology has not been applied on a
9 large scale, if the technology failed, wouldn't
10 that create an increased risk to the community in
11 terms of air quality?

12 THE WITNESS: That's a --

13 COMMISSIONER PERNELL: Is this the
14 ammonia that does the --

15 THE WITNESS: That controls the NOx,
16 yes.

17 COMMISSIONER PERNELL: -- that controls
18 the NOx, right.

19 THE WITNESS: And I think it would
20 matter whether the company decided to continue to
21 operate outside of emission limits and whether
22 they -- I think it would depend on the factors,
23 certainly under the most severe of loading
24 conditions, they may choose to do that. And that
25 certainly would increase their exposure to ozone

1 or other particulates that would be associated
2 with NOx emissions.

3 So it could. I think it would be kind
4 of a limited situation, but it --

5 COMMISSIONER PERNELL: So then if it
6 failed, the company would know it?

7 THE WITNESS: Yes. Normally all these
8 facilities have to have continuous emission
9 monitors, and they would give alarms as soon as
10 their emissions exceeded their allowable limits.

11 COMMISSIONER PERNELL: Please continue,
12 I'm sorry.

13 BY MS. MINOR:

14 Q Mr. Tyler, as you were reviewing the
15 proposed changes in the conditions of
16 certification that were recommended by various
17 City and County of San Francisco witnesses, you
18 indicated that you had been advised not to agree
19 to modifications that had other governmental
20 entities approving actions, policies, and programs
21 because of some problems that you'd had with some
22 of these entities.

23 Was that a comment that was directed
24 specifically at a department or agency of the City
25 and County of San Francisco or a more generic

1 comment?

2 A More generic. Absolutely not. I have
3 no experience, and what I can say is in general,
4 we take any comments from a city and county agency
5 in review of a project very seriously, and we
6 virtually always support their recommendations as
7 long as they're not unreasonable. But we have had
8 instances where it's been used as a tool to either
9 delay or basically penalize or obstruct the
10 project.

11 And, as a result of that, our attorneys
12 believe that we should not ever -- and we really
13 don't have authority under the Warren-Alquist Act
14 to relinquish our authority over the project, our
15 exclusive permitting authority.

16 Q But again, that wasn't a comment that
17 was directed at the City and County of San
18 Francisco --

19 A No, absolutely not. We have no
20 experience with the City and County that would
21 make us feel that way.

22 Q Okay.

23 A I actually would like to reserve the
24 remainder of my questions for after the City's
25 direct witnesses. I'm not sure I'll have more

1 questions for Mr. Tyler, but I think I am finished
2 for the time being, with the right to recall.

3 HEARING OFFICER VALKOSKY: Okay. So
4 you'd just like the right to recall.

5 MS. MINOR: Mm-hmm.

6 HEARING OFFICER VALKOSKY: Okay.
7 Mr. Tyler, will those pose a difficulty? I assume
8 you'll be here, right?

9 THE WITNESS: Yes, I think we're fine.

10 HEARING OFFICER VALKOSKY: Okay.
11 Mr. Westerfield, do you have any objection to
12 having Mr. Tyler recalled, should Ms. Minor so
13 request?

14 MR. WESTERFIELD: No, we don't have any
15 objections, just so long as we get out at a
16 reasonable hour tonight.

17 (Laughter.)

18 COMMISSIONER PERNELL: Everybody is
19 parked in a 24-hour facility, I think.

20 MR. WESTERFIELD: Well, let's hope
21 that's not the only consideration.

22 THE WITNESS: We parked over there. Is
23 that one 24-hour?

24 HEARING OFFICER VALKOSKY: Excuse me,
25 off the record.

1 (Brief recess.)

2 THE WITNESS: I'm still not done?

3 HEARING OFFICER VALKOSKY: No, you're
4 not done.

5 THE WITNESS: Okay.

6 HEARING OFFICER VALKOSKY: Mr. Rostov,
7 cross-examination?

8 MR. ROSTOV: Yes. I just have a few
9 questions.

10 CROSS-EXAMINATION

11 BY MR. ROSTOV:

12 Q I want to make sure I understood your
13 testimony. I think you said that the truck
14 traffic for urea pellets was more than the truck
15 traffic for ammonia?

16 A That's correct.

17 Q What do you base that on?

18 A Actually, that's from the testimony
19 provided by the applicant's witness, and in it he
20 states that, which is reasonable, I don't question
21 it, that there would be 8.7 truck trips per week
22 to supply sufficient urea to supply the facility
23 under the same scenario that requires five trips
24 per week with aqueous ammonia.

25 Q And could you find out?

1 A Yes.

2 Q Yes, please, because that -- Just to
3 inform you, that's different from what the
4 applicant's witness testified to in project
5 description and what they responded to.

6 MR. WESTERFIELD: Okay. It may take him
7 some time to find it.

8 BY MR. ROSTOV:

9 Q Well, let me ask you this question. If
10 I told you that Ms. Zambito, who testified on
11 project description, testified that the truck
12 trips for aqueous ammonia were about once every
13 five days and that truck trips for urea pellets
14 were once every 8-point-some-odd days, and that
15 the applicant also had a data request that said
16 the same thing, a data request responding to
17 Communities for Better Environment, would that
18 change your testimony? Or maybe we should chat,
19 but --

20 A What you're saying is that it wouldn't
21 require 8.7 trucks, it would require a truck every
22 8.7 --

23 Q 8.7.

24 A -- so that would actually reduce the
25 risk, yes, that would change my testimony.

1 Q Okay.

2 MR. ROSTOV: Could we just check --

3 MS. MINOR: Here it is.

4 MR. ROSTOV: Oh, thank you.

5 BY MR. ROSTOV:

6 Q Could I just show you the applicant's
7 response to data request, Communities --

8 A Okay.

9 Q This is response to the -- If you look
10 at response to data request 94, for the Dogpatch
11 Neighborhood Association -- I'm not sure what
12 exhibit that is --

13 MR. WESTERFIELD: He doesn't have that
14 in front of him, but I think he's looking at the
15 testimony of Mr. Lague --

16 THE WITNESS: I'm looking at
17 Mr. Lague's, yes.

18 MR. WESTERFIELD: -- which may say the
19 same thing.

20 MR. ROSTOV: Okay.

21 HEARING OFFICER VALKOSKY: Okay. Let's,
22 before we get any further, I have as Exhibit Seven
23 Applicant's responses to Dogpatch's data request 1
24 through 124.

25 MR. ROSTOV: I'll wait.

1 MR. WESTERFIELD: I don't have those --
2 Would you like to show the witness the document
3 you're going to ask him a question about?

4 MR. ROSTOV: Yes.

5 HEARING OFFICER VALKOSKY: Off the
6 record, please.

7 (Brief recess.)

8 HEARING OFFICER VALKOSKY: Mr. Rostov,
9 could you please re-ask the question.

10 MR. ROSTOV: Yes.

11 BY MR. ROSTOV:

12 Q My question is for urea pellets, tell me
13 the number of truck trips for urea pellets,
14 according to the applicant.

15 A According to this it's one truck trip
16 every 8.7 days.

17 HEARING OFFICER VALKOSKY: Okay.
18 Mr. Tyler, what's "this"? You said, "According to
19 this," it's --

20 THE WITNESS: That's according to the
21 data response, or data request response number 94
22 by responses of DNA.

23 HEARING OFFICER VALKOSKY: Response to
24 DNA?

25 THE WITNESS: To DNA, response to DNA

1 data request, Potrero power plant Unit Number
2 Seven.

3 HEARING OFFICER VALKOSKY: Okay. For
4 the record, that's Exhibit Seven.

5 BY MR. ROSTOV:

6 Q What is the number of truck trips needed
7 for aqueous ammonia?

8 A Once every five days, and that's
9 according to Mr. Lague's testimony on page nine,
10 five.

11 Q So having seen those -- the number of
12 truck trips for each, does that change your
13 testimony regarding urea pellets?

14 A Yes, I misinterpreted that. You're
15 correct, it would be actually a lower number of
16 trips with urea pellets.

17 Q Okay. So there would be less potential
18 for accidents with urea pellets?

19 A Yes, that's correct. There would be
20 less truck trips --

21 MR. WESTERFIELD: No, no, no, that's
22 ours.

23 THE WITNESS: Okay.

24 MR. WESTERFIELD: You get to keep that.

25 MR. ROSTOV: Okay, thank you.

1 BY MR. ROSTOV:

2 Q Have you finished your statement, or --

3 HEARING OFFICER VALKOSKY: Okay. I'm
4 not sure I heard it. Mr. Tyler, would you just
5 repeat your last answer to Mr. Rostov.

6 THE WITNESS: What I had interpreted
7 that data to say was that there were 8.7 truck
8 trips required per week for the urea pellets and 5
9 for aqueous ammonia. What the data says is that
10 there would be one truck every 5 days for aqueous
11 ammonia and one trip every 8.7 days for urea,
12 which means, in fact, there would be fewer truck
13 trips for urea. So I was incorrect.

14 HEARING OFFICER VALKOSKY: And,
15 consequently, a lower --

16 THE WITNESS: Consequently a lower
17 number of miles traveled and a lower risk of
18 fatality from the pellets.

19 HEARING OFFICER VALKOSKY: Thank you.

20 Mr. Rostov, continue.

21 MR. ROSTOV: Yes.

22 BY MR. ROSTOV:

23 Q There has been testimony that the risk
24 management plan has not been completed yet. Why
25 is that?

1 A Actually, the regulations for a risk
2 management plan require that the facility conduct
3 an analysis of failure modes for the project, and
4 it's required in the law that that actually be
5 based on final design drawings.

6 And so generally, the case is that an
7 RMP is based on the facility as it's operated, as
8 it's actually built, not based on speculation of
9 how it might be built. So that's not atypical at
10 all. During a permitting process, we don't have
11 final design.

12 So normally you do the RMP based on an
13 evaluation of the project from final design.

14 Q Okay. And I think you were explaining
15 this earlier, but the risk management plan is a
16 delegated federal authority?

17 A That's correct.

18 Q And in this case it's delegated to the
19 City of San Francisco?

20 A That's correct.

21 Q So how does the Energy Commission
22 have -- Why can't -- The question is why can't San
23 Francisco have approval if they have a delegated
24 federal authority on the risk management plan? I
25 mean, does the CEC actually have any power, in

1 that situation, anyway?

2 MR. WESTERFIELD: I'm going to object,
3 because it asks for a legal conclusion from this
4 witness and he's not qualified to make it.

5 HEARING OFFICER VALKOSKY: I'll sustain
6 that, and Mr. Tyler, correct me if I'm wrong, but
7 I would assume your answer would be because your
8 lawyers told you so?

9 THE WITNESS: That's predominantly the
10 reason, yes.

11 HEARING OFFICER VALKOSKY: Okay.

12 MR. ROSTOV: Okay, I've made my point.

13 BY MR. ROSTOV:

14 Q So if you're just looking at hazardous
15 materials from a public policy perspective, just
16 the issue of hazardous materials, why would you
17 choose to store 40,000 gallons of ammonia in a
18 dense urban neighborhood when there is a less
19 toxic alternative?

20 A I think that the decision to require
21 changes to a project should be based on the
22 potential for significant impact. That's what
23 we're supposed to analyze under CEQA.

24 Our analysis does not demonstrate the
25 potential for significant impact. Therefore, I

1 don't feel compelled to require modification of
2 the project. If the ammonia -- If the urea, if
3 it's believed that the urea process would reduce
4 risk and that the risks are unacceptable at the
5 level they are, then that is a decision that the
6 Commissioners have to make.

7 I don't -- I'm not recommending such a
8 condition because I don't believe that the risks
9 that exist now are significant, as defined by
10 CEQA.

11 Q But your testimony does state that urea
12 is a viable alternative; is that correct?

13 A I think what we're saying is it's
14 technically feasible. We're not saying that it's
15 so speculative that it's not possible to do it. I
16 do believe it would pose some economic risk and
17 commercial risk to the applicant.

18 Q I guess I just have one more question.
19 What is your criteria for evaluating environmental
20 justice, or environmental injustice?

21 A If we had a situation where we had
22 unavoidable significant impacts -- in other words,
23 no matter what mitigation we implied, there was
24 potential for significant impact on that
25 community, and it was unavoidable, then that would

1 be an issue for environmental justice.

2 The fact is that what we found is that
3 there is no potential for impact, significant
4 impact to anybody. That's our conclusion.

5 In the absence of impact to anybody, we
6 don't find impact to any specific portion of that
7 community or disproportionate impacts to any part
8 of that community.

9 MR. ROSTOV: I just want to check my
10 notes, but I think I might be done.

11 I'm done with my cross-examination.

12 HEARING OFFICER VALKOSKY: Thank you,
13 Mr. Rostov.

14 Mr. Ramo?

15 MR. RAMO: I have a few questions.

16 CROSS-EXAMINATION

17 BY MR. RAMO:

18 Q Mr. Tyler, I don't -- I accept your
19 expertise in risk analysis. I think you've
20 demonstrated that in a number of ways. You aren't
21 claiming to be an expert on medical impacts, are
22 you?

23 A I did actually work for the Commission
24 for five years as a public health expert, and I
25 have substantial knowledge of regulatory

1 toxicology, so --

2 Q Okay, so -- well, I know Dr. Greenberg
3 is a toxicologist.

4 A Yes.

5 Q Do you have training in a health-related
6 field?

7 A My training, my formal education is as
8 an engineer, but I have done extensive work with
9 regulatory toxicology and risk assessment
10 settings, since I've been employed by the State.
11 And I have taken courses at Davis in that area,
12 and I have read extensively, including the
13 documents that are referenced here. I read every
14 one of the documents that was associated with
15 Appendix A.

16 Q So it's appropriate for me to ask you
17 questions relating to health impacts.

18 A Yes, absolutely.

19 Q Okay. Before I get into that, let me
20 just ask a quick question about the approval
21 issue, and I want to understand the staff's
22 position on this. Is it the staff's position that
23 it would be inappropriate for the Commission to
24 condition this project on the approval of some
25 other government agency?

1 MR. WESTERFIELD: I mean, I think the
2 witness has stated his position several times
3 already --

4 HEARING OFFICER VALKOSKY: Well, I
5 think, let's not go to asked and answered. I
6 think we can dispose of it right now, it's a
7 straightforward question.

8 Mr. Tyler, please answer it.

9 THE WITNESS: My understanding is that
10 the Warren-Alquist Act does not allow us to
11 relinquish our primary permitting authority to
12 another agency.

13 BY MR. RAMO:

14 Q So it would be inappropriate for the
15 Commission to condition this project on the
16 applicant getting a permit from the Regional Water
17 Quality Control Board, for example, based on your
18 understanding of the staff's position.

19 MR. WESTERFIELD: I object to that.
20 He's not a lawyer, he doesn't understand, he
21 doesn't have the qualifications to make those
22 kinds of legal judgments.

23 MR. RAMO: I'm not asking for a legal --

24 HEARING OFFICER VALKOSKY: No, we're not
25 asking for a legal judgment, we're asking for a

1 staff position. I think there is a distinction
2 there.

3 Mr. Tyler, to the extent you feel
4 comfortable or are capable of answering it, please
5 do. To the extent you believe you have to rely on
6 legal advice --

7 COMMISSIONER PERNELL: Well, let me just
8 interject for a minute. Our process depends on
9 approval from the Air District, dependent upon
10 what type of water is being used, Regional Water
11 Quality Control Board, so there are other agencies
12 that have jurisdiction that we rely on for
13 approval. For example, if they don't have their
14 air permits, we can't approve the project.

15 So I think it's a little unfair to say
16 that we don't rely on other agencies for approval,
17 but that's a different question than what is being
18 relayed, my understanding is being relayed to
19 Mr. Tyler at this point.

20 MR. RAMO: Well, let me try --

21 COMMISSIONER PERNELL: So I think that
22 you are -- you've participated in these
23 proceedings enough to know to some extent what our
24 process is.

25 MR. RAMO: I agree. Let me rephrase the

1 question, then.

2 BY MR. RAMO:

3 Q This Commission all the time is
4 dependent upon approval by other agencies; isn't
5 that correct?

6 A It's dependent on agencies doing the job
7 that they are supposed to do, and particularly
8 where it's a federal mandate.

9 Q So it's your view that the specific
10 suggestions by the City of San Francisco where
11 they requested approval was beyond their
12 jurisdiction; is that your opinion?

13 MR. WESTERFIELD: Same objection.

14 MR. RAMO: He testified that --

15 HEARING OFFICER VALKOSKY: He testified
16 to it once, okay.

17 Answer the question and then let's move
18 him off the topic.

19 MR. WESTERFIELD: He's testified to it
20 three or four times.

21 HEARING OFFICER VALKOSKY: I understand
22 that. You heard the ruling.

23 THE WITNESS: The difference here is
24 that we've incorporated the approval into a
25 condition of certification. If the Health

1 Department had a permit that they issued pursuant
2 to federal authority such as the Air District does
3 or such as an NPDS permit, as the Water Quality
4 Control Board would have, then certainly we would
5 be looking for a permit, a federal delegated
6 permit.

7 This program is more administerial.
8 This program doesn't require approval of equipment
9 or mitigations. It requires basically disclosure
10 of risk to the public. And by granting any agency
11 approval in a condition of certification, we are,
12 in effect, relinquishing our ability to deal with
13 the project and exercise our authority as an
14 agency. That's what I've been told by our
15 attorneys.

16 BY MR. RAMO:

17 Q Okay. Now, are you aware of the federal
18 court decision involving EPA's attempt to set a
19 health standard for SO2 based on ignoring
20 transitory impacts to asthmatics?

21 A I am not.

22 Q Would it affect your judgment as to what
23 is a significant health impact if you knew what
24 the federal court final ruling was on the
25 appropriateness of EPA setting a health standard

1 without considering transitory impacts to
2 asthmatics?

3 A Supposing that I did know that, and I'm
4 not questioning that it's true, I would point out
5 that an SO2 standard would, again, be a repeated
6 exposure, day after day, week after week, for who
7 knows how long. In setting a standard like that,
8 transitory irritation would be an issue, because
9 it's repeated and it's ongoing.

10 And certainly, I wouldn't suggest
11 exposure of any individual with a sensitivity
12 repeatedly, intentionally and permissively. This
13 is not that type of situation.

14 Q So the line you're drawing actually is
15 not whether something is transitory, but whether
16 it has the potential be repetitive in its
17 transitory effects.

18 A For those levels of irritation, you
19 would have to have repetitive exposure to the
20 injuries.

21 Q Are you aware, under the California
22 Health and Safety Code, how it addresses odors?

23 A Yes. And again --

24 MR. CARROLL: I'm sorry, addresses what?

25 MR. RAMO: Odors.

1 MR. CARROLL: And in what particular
2 Code decision are you referring to?

3 MR. RAMO: I'm referring to the Health
4 and Safety Code provisions addressing odors. If
5 you want me to get the cite, I can get you. I'm
6 asking generally is he aware if the Code addresses
7 air pollution odors.

8 MR. WESTERFIELD: Yeah, 41700 of the
9 Health and Safety Code.

10 MR. RAMO: That's right.

11 THE WITNESS: That section of the Health
12 and Safety Code, again, addresses repeated
13 effects. Odors that occur repeatedly time after
14 time in a community cause disruption to sleep on
15 an ongoing basis, and they constitute a
16 significant impact. And they're injurious.
17 They're invasive.

18 This is -- Basically what we're doing is
19 entirely different. We're talking about gauging
20 the risk of something that we don't think will
21 ever even occur.

22 BY MR. RAMO:

23 Q Are you aware of whether an air
24 pollution control officer has the authority to
25 issue an enforcement order for a single episode of

1 odor?

2 A I would say that's questionable. It
3 would require -- 41700 of the Health and Safety
4 Code requires a nuisance fine. So I'm not saying
5 it's never happened, what I'm saying is 41700 of
6 the Health and Safety Code envisions a nuisance,
7 which means it's ongoing, and it would have to be
8 cited to be evaded.

9 Q Well, are you saying that it's possible
10 that an abatement order can be issued for a single
11 episode of an odor?

12 A I'm not saying it hasn't been done. I'm
13 saying I don't think I would do it and I don't
14 think it would be appropriate.

15 Q And your basis for that it wouldn't be
16 appropriate is based on the language of the
17 statute?

18 A Yes. I don't believe that one incident,
19 if it were accidental in nature, that wasn't
20 likely to ever be repeated, would be a basis for
21 that sort of citation, unless it was viewed
22 somehow that it was going to continue into the
23 future, or that there was something negligent
24 about allowing it to happen.

25 Q Okay. Well, we'll take that up in the

1 briefing, but let me turn you to page 5.5-14 of
2 your testimony, and I want to go back to the
3 "Because" sentence.

4 MR. WESTERFIELD: His testimony?

5 MR. RAMO: Yes.

6 THE WITNESS: What page, again?

7 BY MR. RAMO:

8 Q 5.5-14.

9 A Okay.

10 Q And I'm referring to the samples under
11 Cumulative Impacts. And my first question is, is
12 it your opinion that the risk from the use of
13 hazardous materials in Southeast San Francisco
14 that exist today are acceptable?

15 A In the absence of knowing exactly what
16 all those are, I don't think I can say
17 unequivocally that it is or isn't. What I can say
18 is I believe in general the regulations and
19 requirements for transportation of hazardous
20 materials, storing and handling of hazardous
21 materials, and certainly for this facility are
22 acceptable.

23 Q Okay. So you aren't implying, when you
24 say the use of hazardous materials has already
25 been addressed, that you've done a quantitative

1 risk assessment and determined that Southeast San
2 Francisco has acceptable risk from the use of
3 these chemicals; is that correct?

4 A No. What I've looked at is this
5 facility and the area immediately surrounding this
6 facility, from the standpoint of cumulative
7 impact, as we said, using the one-mile radius.
8 And we don't believe there is unacceptable
9 cumulative impacts.

10 Q Okay. So you've done a quantitative
11 risk assessment on the use of hazardous materials
12 with a one-mile radius; is that correct?

13 A I have not. I believe Alvin did look at
14 the radius within one mile and we didn't identify
15 any significant cumulative impact.

16 Q Is that quantitative risk assessment
17 anywhere in your testimony?

18 MR. WESTERFIELD: He didn't -- I have to
19 object to that. He did not testify that a
20 quantitative risk assessment had been done, and he
21 was referring to something that Mr. Greenberg did,
22 and that reference didn't mention a quantitative
23 risk assessment.

24 MR. RAMO: Okay. Let me ask it straight
25 up.

1 BY MR. RAMO:

2 Q Did you do a quantitative risk
3 assessment on the sources within a one-mile
4 radius?

5 A No. I believe that what we did or what
6 Alvin did was look at facilities and what they
7 handled, and tried to determine if there was an
8 unacceptable risk or an unreasonable risk that was
9 being added to by this project.

10 Q Is there any documentation of the look
11 that Dr. Greenberg did of the sources within one
12 mile?

13 A No, and in his absence being here, I
14 can't attest to that.

15 Q Now, it also seemed that you were --
16 Let's focus again on the word "addressed." Has
17 Unit Three ever gone through a certification
18 proceeding before the California Energy
19 Commission?

20 A I don't believe so.

21 Q Unit Three has been around for decades;
22 is that correct?

23 A That's my understanding, yes.

24 Q And that preceded most of the
25 environmental regulations that we're all

1 struggling with today; isn't that correct?

2 A I don't know when it was permitted, but
3 many of the regulations were retroactive. I don't
4 know which ones weren't or exactly when it was
5 permitted and what it's subject to now.

6 Q Now, are you also familiar with the
7 concern in environmental justice literature that
8 there may be unequal enforcement of regulations?
9 Have you heard of that concern?

10 A No.

11 Q So you don't know as a fact whether
12 regulations in Southeast San Francisco have been
13 enforced to the same extent as they're being
14 enforced in other areas of the city where there
15 isn't a population of people of color, or other
16 protected people under the concept of
17 environmental justice?

18 A I have no basis to believe they're being
19 enforced differentially. My experience with
20 environmental regulations is they're generally
21 across industries and they generally affect
22 everybody that's in that industry. I'm not
23 certain whether agencies provide more personnel to
24 inspect one area versus another, because I don't
25 work there and I am not responsible for their

1 actions.

2 But from the standpoint of general
3 regulations, I would say they're applied across
4 the board regardless of what area the plant is in,
5 equally.

6 Q But you haven't looked at any of the
7 studies --

8 A I haven't looked at enforcements.

9 Q -- that have addressed the question of
10 unequal enforcement.

11 A No, I have not.

12 Q Now, in analyzing the impact of ammonia
13 concentrations, you did not consider what other
14 ambient concentrations of toxics may be in the
15 area, did you?

16 A No, because that -- the only other
17 toxics in the air I would look at under this
18 scenario would be acute exposures from accidental
19 releases. I did not look at chronic exposures and
20 try to blend those with acute exposures.

21 Q So you did no analysis of the standards
22 to determine whether their development was based
23 on a consideration of synergistic or cumulative
24 impacts or whether they were simply based on
25 exposure to ammonia alone, did you?

1 MR. CARROLL: I have a quick -- What
2 standards are you --

3 MR. RAMO: The standards referred to in
4 Appendix B.

5 THE WITNESS: But the other standards
6 you're talking -- I assume you're talking about
7 standards that exist for other pollutants that are
8 in the air?

9 BY MR. RAMO:

10 Q No, I'm saying in relying on these
11 standards that you have in Appendix B, you didn't
12 consider whether in the development of those
13 standards they considered whether that level of
14 exposure addressed by the standards were happening
15 at the same time as there were other exposures of
16 chemicals; did you consider that?

17 A Again, if I were looking at multiple
18 prudent exposures, if I believed there were risks
19 of acute exposures to another compound with
20 similar target organs, I most certainly would
21 have. If, in other words, I felt that there was a
22 mode for release of sulfuric acid or some other
23 material to the air at the same time, I would
24 certainly look at those and use a hazard indices
25 approach to evaluate it.

1 But in terms of other things in the air,
2 such as chronic levels for air pollution, no,
3 because I don't believe those would be significant
4 in the context of a -- In other words, normal air
5 pollution would be much below the levels that I
6 would expect this to cause under an emergency
7 situation for one-time exposure.

8 Q So you didn't look at the synergistic
9 relationship between PM10 in the air and what if
10 there was an ammonia spill at the time that PM10
11 was above health standard, that wasn't part of
12 your methodology?

13 A No, that wasn't part of it, and neither
14 was it -- it wasn't part of the NAS analysis, so
15 that's what we based on analysis on.

16 Q One last area I want to ask you about.
17 Let me ask you to turn to page 5.5-8, and the
18 section entitled Large Quantity Hazardous
19 Materials.

20 A Okay.

21 Q And in the --

22 MR. WESTERFIELD: Are you going to ask
23 him about the typo in the title?

24 HEARING OFFICER VALKOSKY:

25 Mr. Westerfield, let Mr. Ramo proceed.

1 MR. WESTERFIELD: We'll see if it comes
2 up.

3 BY MR. RAMO:

4 Q In the last paragraph of the page, there
5 is as discussion of patrillion containing
6 hazardous materials; do you see that paragraph?

7 A Which one, which paragraph?

8 Q It begins with large quantities of
9 patrillion containing hazardous materials are
10 presently used on site. The last paragraph on
11 5.5-8.

12 A Okay, yes.

13 Q And in the second sentence, I'll just
14 read it so we know what we're talking about,
15 "Fuels such as fuel oil number six, mineral oil,
16 lube oil, and diesel fuel are all of very low
17 volatility, and impacts of spills are expected to
18 remain on site"; do you see that sentence?

19 A Mm-hmm.

20 Q In making your statement that you expect
21 the spills to remain on site, did you consider the
22 history of spills going off site documented in the
23 phase one and phase two evaluation of the project?

24 A I think we need to make a distinction
25 here. In making this statement we're talking

1 about exposures, acute exposures of the public
2 through breathing or direct contact from an
3 accidental release. If you're speaking of
4 groundwater contamination or migration of
5 materials into some environmental medium, that
6 wasn't considered here, and it wasn't our intent
7 to do that. What we're talking about is if there
8 was a spill of fuel oil on site, we wouldn't
9 expect the emissions from that spill to migrate
10 off site and affect anybody.

11 Q So your concern was air, the pathway of
12 breathing exposure; is that correct?

13 A Right, for an acute, accidental event.

14 Q So you didn't evaluate whether people
15 fishing near the power plant might be exposed to
16 fuel in the water coming from a broken pipeline,
17 for example?

18 A No. If that were raised, certainly if
19 there were a scenario that resulted in that, I
20 certainly would have considered looking at it.
21 From a chronic standpoint, normally we do our
22 public health analysis, which deals with
23 contamination of water and air on a basis that
24 leads to exposures through pathways such as
25 fishing and that sort of thing.

1 But for an acute exposure I might have
2 looked at it, but I don't believe we identified
3 any mechanism for acute exposure.

4 Q Did you review the phase one and phase
5 two and subsequent investigations documenting the
6 history of spills at the site?

7 A No, that's normally a waste management
8 issue. That's the testimony that would deal with
9 contamination of soils, waste removal, that sort
10 of issue.

11 Q But am I understanding you correctly
12 that if indeed there was a history of spills that
13 might result in dermal contact with someone
14 fishing near the site, that might be a reasonable
15 thing to evaluate in terms of an acute hazardous
16 materials incident?

17 A Yes. Again, I'm not at all certain
18 that -- As a matter of fact, I don't think it's
19 the case that any of these fuels are part of this
20 project.

21 Q Well, I'll take your yes, and
22 fortunately we leave the questions to the
23 attorneys.

24 MR. RAMO: I'm finished, thank you.

25 HEARING OFFICER VALKOSKY: Redirect?

1 MR. WESTERFIELD: No redirect.

2 HEARING OFFICER VALKOSKY: Okay.

3 Mr. Tyler, the committee thanks you and excuses
4 you subject to recall, should Ms. Minor so
5 request.

6 THE WITNESS: Okay.

7 (The witness was excused.)

8 HEARING OFFICER VALKOSKY: Any exhibits,
9 Mr. Westerfield?

10 MR. WESTERFIELD: I'm sorry?

11 HEARING OFFICER VALKOSKY: Do you have
12 any exhibits you'd like to move at this time?

13 MR. WESTERFIELD: Yes, I would,
14 Mr. Valkosky. I would like to move the
15 appropriate sections I guess of Exhibit I believe
16 it's Three.

17 HEARING OFFICER VALKOSKY: The final
18 staff assessment.

19 MR. WESTERFIELD: The final staff
20 assessment entitled Hazardous Materials Management
21 into the record.

22 HEARING OFFICER VALKOSKY: Is there
23 objection, Mr. Carroll?

24 MR. CARROLL: No objection.

25 HEARING OFFICER VALKOSKY: Ms. Minor?

1 MS. MINOR: No objection.

2 HEARING OFFICER VALKOSKY: Mr. Rostov?

3 MR. ROSTOV: No objection.

4 HEARING OFFICER VALKOSKY: Mr. Ramo?

5 MR. RAMO: No objection.

6 HEARING OFFICER VALKOSKY: That portion
7 of Exhibit Three is admitted.

8 Okay. At this time we'd like to take a
9 five-minute recess, and when we reconvene it will
10 be with the direct testimony from the City and
11 County of San Francisco.

12 (Brief recess.)

13 COMMISSIONER PERNELL: Mr. Valkosky.

14 HEARING OFFICER VALKOSKY: Thank you,
15 Commissioner. I'll note for the record that
16 Mr. Ramo has left. This means he will be fresher
17 than the rest of us tomorrow, so I would urge
18 everyone to proceed as expeditiously as possible.

19 Ms. Minor, your direct.

20 MS. MINOR: Yes. The City has three
21 hazardous materials witnesses: Sue Cone, Richard
22 Lee, and Steve Radis. We're going to start with
23 Sue Cone.

24 HEARING OFFICER VALKOSKY: Okay. If you
25 would have the witnesses sworn, please.

1 THE REPORTER: If the witnesses would
2 please stand and raise their right hands.

3 Whereupon,

4 SUE CONE, RICHARD LEE, and STEVE RADIS
5 Were called as witnesses herein and, after first
6 being duly sworn, were examined and testified as
7 follows:

8 DIRECT EXAMINATION

9 BY MS. MINOR:

10 Q Ms. Cone, would you please state your
11 name and professional qualifications and
12 educational background.

13 A Sure. My name is Sue Drost Cone, and
14 I'm a certified industrial hygienist and the
15 program manager for the Hazardous Materials
16 Unified Program Agency for the San Francisco
17 Department of Public Health. My business address
18 is 1390 Market Street, Suite 210, in San
19 Francisco, 94102.

20 As program manager for the Hazardous
21 Materials Unified Program Agency, I am responsible
22 for the day-to-day management of eight
23 environmental programs, including hazardous
24 materials storage. I have a bachelor of science
25 degree in biological sciences from Fairfield

1 University, and a master of science degree in
2 industrial hygiene from Drexel University.

3 I've been employed in my current
4 position with the San Francisco Department of
5 Public Health for 11 years. Prior to joining the
6 Department of Public Health, I was employed as a
7 safety and health professional for various US Navy
8 installations, and as a compliance officer for the
9 Occupational Safety and Health Administration.

10 Q Okay, thank you. In your testimony, you
11 make several comments stating policies of the
12 Department of Public Health. Would you review
13 those comments, please.

14 A I have the following comments. One:
15 There are currently only five facilities in San
16 Francisco that are required to prepare a risk
17 management plan, otherwise known as an RMP. Four
18 of these five are in the southeast section of San
19 Francisco. The quantities of ammonia stored at
20 these five facilities range from 1200 pounds to
21 18,000 pounds.

22 Two: Mirant proposes to install two
23 20,000-gallon aqueous ammonia storage tanks on the
24 Potrero power plant site. Each of these tanks
25 will hold the equivalent of 148,000 pounds of

1 ammonia. The Potrero site will become the largest
2 site within San Francisco where ammonia is stored.

3 Three: The RMP requires the inclusion
4 of an off-site consequence analysis, which details
5 results of air dispersion modeling for the subject
6 chemical. The Hazardous Materials Unified Program
7 Agency strongly encourages facilities preparing an
8 RMP to use the air dispersion modeling program
9 called RMP comp to model the worst-case scenario.

10 If the facility chooses to use an
11 alternate analysis tool, we expect that a
12 comparison analysis between RMP comp and the
13 modeling program used be prepared. The
14 requirements of the off-site consequence analysis
15 are in the regulated substance program guidance
16 dated February 2002, prepared by the Hazardous
17 Materials Unified Program Agency.

18 Four: The preferred United States
19 Environmental Protection Agency risk management
20 plan toxic end point is the emergency response
21 planning guideline two of 150 parts per million
22 for ammonia; however, for new facilities, the
23 Hazardous Materials Unified Program Agency expects
24 that the design criteria be established at 35
25 parts per million at the fence line. Thirty-five

1 ppm is the 15-minute exposure limit for workers
2 during an eight-hour work day recommended by the
3 National Institute for Occupational Safety and
4 Health short-term exposure limit.

5 Five: The Hazardous Materials Unified
6 Program Agency requires that RMPs include a
7 seismic analysis. Based upon on-site inspection,
8 a seismic expert must certify the ability of
9 certain equipment to withstand earthquake damages.

10 Q Okay. Ms. Cone, I'm going to go back
11 and ask you for more specificity about two of your
12 comments that have generated a fair amount of
13 comment today. The first relates to the
14 recommendation that RMP comp be used.

15 Can you explain more specifically why
16 RMP comp is recommended by HMUPA?

17 A Sure. In our guidance for RMPs, we
18 recommend that RMP comp be used because it is a
19 fairly simple air modeling program, and we have
20 tried to facilitate the RMP process for
21 businesses. Several of the businesses are not
22 large in San Francisco that have been required to
23 prepare RMPs, and we wanted to make things as easy
24 as we could for them.

25 The second aspect of that recommendation

1 that RMP comp be used is that by having facilities
2 use that, if at all possible, it helps us to
3 compare apples to apples and oranges to oranges;
4 that way, we won't have one facility using one
5 modeling program and another using another. It
6 just makes it easier for us to be consistent with
7 implementation of the RMP program.

8 Q Do you know whether EPA regulations
9 permit the City to require any company that wants
10 to use a program other than RMP comp to compare,
11 in this case, what is it called, screen --

12 A Screen three?

13 Q -- screen three to RMP comp?

14 A The local implementing agencies are
15 given a degree of latitude to work with facilities
16 in the process of preparing a risk management
17 plan. I think you heard in testimony earlier that
18 it can take up to a year, and, as a matter of
19 fact, part of the requirements for an RMP is that
20 it be a give-and-take process between the
21 regulated business and the implementing agency.

22 And again, while we certainly recommend
23 the use of RMP comp, we are open to the use of
24 other models as well, although we certainly prefer
25 RMP comp.

1 Q Okay, thank you. What is the basis of
2 35 parts per million at the fence line as a level
3 of concern that the Department of Public Health
4 has requested be used in this case? Where did 35
5 parts per million come from?

6 A Thirty-five parts per million is the
7 short-term exposure limit that is established by
8 the National Institute for Occupational Safety and
9 Health. Once again, it is a 15-minute exposure
10 for workers. And I am not a toxicologist, but I
11 have had some courses in toxicology, and we've
12 spent a lot of time today and this evening talking
13 about the relative health effects of the various
14 concentrations of ammonia.

15 And I think when we look at those
16 levels, for example, the 64 ppm, we spent a lot of
17 time looking at that, I suspect that it's a bell-
18 shaped curve and that the majority of people will
19 experience those effects that are listed for any
20 particular concentration. But there are groups of
21 people that are outliers, either on the low end or
22 the high end, and there are certainly individuals
23 that wouldn't have those effects. Maybe they
24 wouldn't even have any effects at all.

25 But conversely, there are people that

1 are on the other side of the spectrum that may, in
2 fact, experience more significant health effects
3 than what is listed for any of those
4 concentrations.

5 And I think also, in establishing the 35
6 parts per million, we considered more than just
7 immediate or significant health hazards. And we,
8 in doing that, we looked at public health policy
9 and considered the fact that more than likely, at
10 a higher level, people would panic or people may
11 panic. And they may end up in the emergency room.
12 And that might tax the emergency room beyond the
13 point at which they should be taxed, and perhaps
14 other people that are sick and are in immediate
15 need of real medical care won't be able to get it
16 because the emergency room is clogged with
17 individuals that are experiencing these transitory
18 effects from ammonia.

19 Q Thank you. You listed in your testimony
20 five businesses that currently have RMPs. And I
21 believe these five store ammonia.

22 A That's correct.

23 Q Okay. Is the 35 parts per million
24 standard being imposed on those five businesses?

25 A It is not being imposed on businesses

1 that were already in existence. Of those five
2 facilities listed, one of them is a new ammonia
3 facility and their design criteria was 35 parts
4 per million at the fence line.

5 Q And which one is the new facility?

6 A That would be the UCSF ammonia
7 containment structure, the first one that's
8 listed.

9 Q Okay, and more specifically, what is
10 that facility?

11 A It's a power plant located at the
12 Parnassus campus.

13 Q And what size is it?

14 A I believe the tank is an 8,000 tank.

15 Q So it's a very small power plant, okay.

16 And when did the department establish 35
17 parts per million as its design criteria?

18 A We've been actively engaged in
19 implementing the RMP program for approximately two
20 years, two to three years, and it was immediately
21 when we got the application for the first new RMP,
22 which was from UC, so it's probably about two
23 years ago.

24 Q Okay, thank you. Do you have any
25 further suggested changes in conditions of

1 certification? I am specifically looking at
2 Exhibit C to your testimony.

3 A No, I do not.

4 Q Okay, thank you.

5 MS. MINOR: I have no further questions
6 at this time for Ms. Cone.

7 HEARING OFFICER VALKOSKY: Do you want
8 to continue with all of your witnesses?

9 MS. MINOR: I think so, because I'm sure
10 we'll be able to get her out of here.

11 The next witness is Richard Lee.

12 BY MS. MINOR:

13 Q Would you please state your name,
14 professional qualifications, and educational
15 background.

16 A Okay. My name is Richard Lee. I'm a
17 senior industrial hygienist for the San Francisco
18 Department of Public Health, and I manage the
19 Incident Investigation and Response Program for
20 Department of Health section. I'm located at 1390
21 Market Street, Suite 910.

22 The Incident Investigation and Response
23 Program responds to hazardous materials incidents
24 and we serve as technical consultants during
25 hazardous material incidents for the fire

1 department, police department, and other public
2 safety agencies. We provide guidance on
3 identification of hazards. We do air monitoring,
4 we suggest personal protective equipment for the
5 responders, and we oversee the cleanup.

6 I have personally responded to hundreds
7 of hazardous materials incidents in the last 14
8 years in San Francisco, and some of these have
9 included incidents involving the release of
10 ammonia and chlorine. I also supervised the
11 Hazardous Waste Enforcement and Asbestos Programs
12 for Department of Public Health.

13 I have a bachelor of arts in
14 bacteriology from the University of California at
15 Berkeley, and a masters in public health with a
16 specialization in environmental health from the
17 School of Public Health at UC Berkeley.

18 I've been an industrial hygienist for 23
19 years, the last 15 years with the City.

20 Q Mr. Lee, let me confirm that you are the
21 same Richard Lee who filed written testimony on
22 July 10th in this matter?

23 A Yes, I am.

24 Q Okay. In your testimony, you raised
25 several concerns related to hazardous materials.

1 Would you briefly outline those concerns.

2 A Okay. First of all, the Department of
3 Public Health supports the reduced use of
4 hazardous materials, because it reduces the number
5 of hazardous materials incidents and severity of
6 those incidents. During the last ten years, the
7 number of facilities in San Francisco storing
8 extremely hazardous materials such as ammonia and
9 chlorine has been reduced by 50 percent, and we
10 want to encourage that reduction. We certainly
11 don't want to see an increase.

12 Because of the proposed site, we will
13 see a large increase in hazardous materials
14 storage, and the Mirant site will be the largest
15 ammonia storage facility in San Francisco. Also,
16 Department of Public Health is concerned that the
17 cumulative impacts of transportation and the
18 storage of additional quantities of hazardous
19 materials in Southeast San Francisco were not
20 adequately considered and addressed by the CEC
21 staff.

22 Also, we're concerned about the
23 environmental justice implications of
24 transporting, using, and storing large quantities
25 of hazardous materials at the Potrero power plant

1 in Southeast San Francisco where there is a
2 significant minority -- I mean, an area where
3 there is a significant minority and low-income
4 population.

5 Four to five risk management plan sites
6 in San Francisco are located in Southeast San
7 Francisco. Additionally, 37 percent of the
8 facilities that store large quantities of
9 hazardous materials are located in Southeast San
10 Francisco. Twenty-eight percent of the Department
11 of Public Health's enforcement actions related to
12 hazardous materials spills or incidents involve
13 facilities in Southeast San Francisco, and 28
14 percent of the total facilities with hazardous
15 materials are located in South San Francisco.

16 Fourth, the condition of certification
17 of haz three requires Mirant to develop and
18 implement a safety management plan for delivery of
19 ammonia. Because of the high level of community
20 interest and concern and responsibility of the
21 Department of Public Health to respond to events
22 or spills or accidents involving ammonia, the
23 Department of Public Health recommends that haz
24 three be modified to require review and approval
25 of a safety management plan by the Department of

1 Public Health.

2 Fifth, the materials management section
3 of the CEC staff testimony states that the level
4 of concern for ammonia should be set at 75 parts
5 per million. For us, this is too high and must be
6 lowered to minimize adverse effects from exposure
7 to ammonia in the event of a spill or accident.

8 Appendix B to the CEC staff testimony
9 also supports our conclusion that 75 ppm is too
10 high to protect the public. Appendix B of the CEC
11 staff testimony entitled Summary of Adverse Health
12 Effects of Ammonia lists the health effects for
13 exposure at 64 ppm, which is less than 75 ppm, as
14 tearing of eyes, odors noticeable and
15 uncomfortable, sensitive people experience more
16 irritation; mouth, eye, nose, or throat
17 irritation; eye, ear, throat irritation in
18 sensitive people; and asthmatics may experience
19 breathing difficulties.

20 Q Can I just ask you to stop there, and we
21 will cover the remainder in your conditions of
22 certification.

23 A Okay.

24 Q Because you have professionally
25 responded to incidents involving ammonia, is there

1 anything further you can add to Ms. Cone's
2 testimony to further clarify why the Department of
3 Public Health believes that the level of concern
4 should be set at 35 parts per million?

5 A I've responded to a number of incidents
6 involving hazardous materials, and I believe that
7 a lot of the people react at very low levels of
8 exposure. Ms. Cone discussed people panicking.
9 We've had a number of incidents where, after there
10 have been releases, we've had people call and are
11 concerned and report to us. And also, they've
12 gone to the hospitals, even though we know that
13 they have not been even exposed to high levels.

14 So we think that the level of 75 ppm,
15 even though there may not be so-called permanent
16 injury, it's certainly a level that people are
17 going to be experiencing. They're going to have
18 irritation, and they're going to start really to
19 be concerned about what they're going to do.

20 And a lot of times there's no one
21 telling them what to do. So if you can imagine,
22 if you were, let's say, a child or playing out in
23 the street, and all of a sudden this irritating
24 odor comes at you, you've got irritated eyes, your
25 eyes are tearing and you're wondering what the

1 heck is going on. You don't know where to go, you
2 don't know who to talk to, and you're going to
3 start panicking.

4 And then let's say that you were a mom
5 in that same situation. You want to get your
6 children out of there as soon as possible. You
7 don't know what to do. You know, you've got --
8 you're in a cloud of hazardous materials, and you
9 don't know where to go. You don't know if you
10 should be going in your home, you don't know if
11 you should be going north, going south, you know,
12 it's going to be a situation where a lot of people
13 are panicked.

14 And that's why we think that the LLC
15 should be lowered to 35 ppm. Even at that level,
16 they're still going to be experiencing the odor,
17 and a lot of people still will be concerned. But
18 at 75 ppm they're definitely going to be
19 panicking.

20 Q Okay, thank you. Would you quickly
21 review the recommended changes in the haz three
22 condition of certification that you recommend.

23 A Okay. I reviewed it.

24 Q Okay. Do you have any further changes
25 or modifications that you are proposing in haz

1 three?

2 A I would say the health department could
3 live with the removal of the word "approval" in
4 haz three. I think what we just want to do is
5 that we want to be able to see the document, make
6 comments to it, and hopefully the CEC staff will
7 adopt our recommendations.

8 Before there was no discussion about
9 having the City review that safety management
10 plan.

11 Q Okay. So your modification is such that
12 your recommendation now reads, "Require review by
13 the San Francisco Department of Public Health of a
14 safety management plan for delivery of ammonia."

15 A Yes.

16 Q Any further comments on your testimony?

17 A Not right now.

18 MS. MINOR: Thank you.

19 HEARING OFFICER VALKOSKY: Could we go
20 off the record for a second.

21 (Brief recess.)

22 HEARING OFFICER VALKOSKY: Ms. Minor, is
23 it your intention to continue with Mr. Radis at
24 this time or to open your other --

25 MS. MINOR: Yes, unless there are

1 questions. His testimony is quite different than
2 the testimony of the two Department of Public
3 Health witnesses, and so if the committee has
4 questions that you'd like to pose to them now --

5 HEARING OFFICER VALKOSKY: Okay. The
6 committee does have questions.

7 Mr. Westerfield, Mr. Carroll,
8 Mr. Rostov, do you have any questions specifically
9 for Ms. Cone or Mr. Lee, in terms of cross?

10 MR. WESTERFIELD: Yes, I do.

11 HEARING OFFICER VALKOSKY: Okay. Would
12 you prefer to do that at this time, looking to the
13 fact that we could possibly excuse those witnesses
14 and then focus on Mr. Radis?

15 MR. WESTERFIELD: I'd be happy to do
16 that.

17 MR. CARROLL: I have one very short
18 question for Ms. Cone.

19 HEARING OFFICER VALKOSKY: Okay. Well,
20 why don't we do that, then. We can open up your
21 two witnesses to cross-examination. We'll save
22 Mr. Radis for the end.

23 MS. MINOR: That's fine. I'll now
24 tender for cross-examination Mr. Lee and Ms. Cone.

25 HEARING OFFICER VALKOSKY: Okay, thank

1 you.

2 Why don't you proceed, Mr. Westerfield.

3 MR. WESTERFIELD: Does the applicant --

4 HEARING OFFICER VALKOSKY: I'm sorry, I
5 was looking in your direction. Mr. Carroll?

6 MR. CARROLL: Yes. I have just one very
7 quick question.

8 CROSS-EXAMINATION

9 BY MR. CARROLL:

10 Q Ms. Cone, you mentioned of the five
11 facilities listed on page two of your prepared
12 testimony that the UC San Francisco facility,
13 which was recently permitted, is meeting or was
14 required to meet a 35-ppm limit.

15 And my question is what is the distance
16 between the ammonia storage tank at that facility
17 and the nearest residence?

18 A Before I answer your question I would
19 like to clarify one point, and that is the fact of
20 requiring. The 35 ppm is not a statutory
21 requirement, it is a recommendation. Because the
22 RMP process is so publicly driven, it is our
23 recommendation to the regulated business that
24 that's where it be set. But it has no basis in
25 statute.

1 Q Okay. Thank you for that clarification.

2 A I believe that that tank at UC is fairly
3 close to the property line. And I want to say
4 something on the order of 100 feet.

5 Q Does 23 feet ring a bell with you?

6 A It could.

7 Q Okay, thank you.

8 MR. CARROLL: That was my only question.

9 HEARING OFFICER VALKOSKY:

10 Mr. Westerfield?

11 MR. WESTERFIELD: Thank you.

12 Ms. Cone, Bill Westerfield representing
13 the staff. Hello.

14 CROSS-EXAMINATION

15 BY MR. WESTERFIELD:

16 Q You mentioned these other facilities
17 that are listed here on page two of your
18 testimony. Which if any of these other facilities
19 handle anhydrous or aqueous ammonia?

20 A They all handle anhydrous except for
21 University of California, which is aqueous.

22 Q All right. And I assume that they have
23 ammonia -- Ammonia is delivered to these
24 facilities via truck, via delivery truck?

25 A That's right.

1 Q Has the City required any of these
2 facilities to have catchment basins for the
3 delivery trucks?

4 A Once again, and I'll repeat my point
5 about not being able to require anything, we can
6 make recommendations, but as far as requiring
7 mitigation measures, we don't do that. A risk
8 management plan is simply an analysis of the risk.
9 We do not approve risk management plans, we accept
10 them as complete.

11 The anhydrous facilities have been here
12 probably long before you and I ever thought about
13 anhydrous ammonia, so those aren't an issue. The
14 tank at UCSF is, in fact, an underground tank and
15 it is in a containment structure, so they went
16 down a little bit of a different road and there
17 was containment for that.

18 Q So to speak.

19 A Yes.

20 Q But I'm talking about the delivery truck
21 for the offloading of the ammonia. Does the City
22 either require or recommend a catchment basin
23 where the ammonia is offloaded?

24 A Yes, that is a recommendation that we
25 would have.

1 Q That you have for that facility?

2 A Yes, mm-hmm.

3 Q Have you also made that recommendation
4 for the other facilities?

5 A No. No, because, again, these are
6 old -- I shouldn't say old -- existing facilities,
7 so we used a little different approach.

8 Q Okay. And then one other question. If
9 San Francisco is so concerned with new sources of
10 hazardous materials, why did it permit an 8,000-
11 gallon tank of ammonia to be located in a heavily
12 urbanized area, in that part of San Francisco?

13 A Once again, we can't prohibit the siting
14 of any hazardous materials facilities. We gave
15 the same recommendations during that process. We
16 prefer that hazardous materials be kept, to be
17 minimized as much as possible. We have no
18 authority to stop sitings, however.

19 Q Did the City recommend that the facility
20 not be built?

21 A I don't know whether we specifically
22 made that recommendation. We certainly -- In all
23 cases we recommend that the tank be kept to the
24 smallest size possible, the highest level of
25 mitigation be instituted. Whether or not we

1 specifically recommended the facility not be
2 built, I don't know if that's true.

3 MR. WESTERFIELD: Okay, thank you.

4 BY MR. WESTERFIELD:

5 Q And, Mr. Lee, I just have a few
6 questions for you. You mentioned, I believe, on
7 page two of your testimony, I think down on lines
8 22 through 25, that "The DPH" -- I'll let you turn
9 there -- I think it says that "The DPH is equally
10 concerned about the environmental justice
11 implications of transporting, using, and storing
12 large quantities of hazardous materials at Potrero
13 power plant, Southeast San Francisco."

14 A Mm-hmm.

15 Q What exactly are the City's
16 environmental justice concerns?

17 A I would say that the Health Department's
18 concern about the number of hazardous materials
19 and hazardous waste facilities at that location --
20 I mean, at those neighborhoods where there are
21 higher levels of minority populations, and the
22 fact that it's been that way for a long, long
23 time, and I think they're concerned now that we
24 don't want to necessarily add more possibility for
25 injury, more risk to that community.

1 Q Okay. And what would the DPH have the
2 applicant do differently to alleviate its
3 concerns?

4 A Well, I would think that altering the or
5 reducing the amount of hazardous materials that
6 are stored there would help. I would think that
7 we would support using urea pellets, which is
8 going to be less hazardous than aqueous ammonia.

9 Q Did the City recommend the use of urea
10 pellets for the UCSF power plant?

11 A Well, we did not have -- Well, I
12 certainly -- I myself was not involved in
13 decision-making for that plant. I know that they
14 didn't go through the CEC process, because I think
15 the power levels for the plant are a lot lower.

16 So I don't think we necessarily had the
17 same opportunities to make comments like we do
18 here.

19 Q Do you know if they made any
20 recommendations to UCSF to use urea pellets there?

21 A I am not aware of any.

22 Q Ms. Cone, are you aware of any?

23 A No, I'm not either.

24 MR. WESTERFIELD: Thank you. That's all
25 I have.

1 HEARING OFFICER VALKOSKY: Mr. Rostov?

2 MR. ROSTOV: No questions.

3 HEARING OFFICER VALKOSKY: Okay. I have
4 a couple of questions. I will try to address them
5 properly, but if I get it mixed up, please the
6 other witness jump in.

7 Mr. Lee, are you aware of adverse
8 physical health effects or injuries -- Let me
9 change that -- any physical injuries which occur
10 as a result of transitory exposure to ammonia
11 levels of 75 ppm or lower?

12 WITNESS LEE: I'm not a toxicologist.
13 I've had some training in toxicology. A lot of
14 the -- My testimony is based on what the CEC staff
15 drafted in the FSA. I know that based on what the
16 ACGIH has recommended for a threshold limit value,
17 that if they were exposed to 35 parts per million
18 over an eight-hour day, day after day, that they
19 would not have long-term health effects, but
20 that's for a normal worker.

21 Now, chances are if you are a sensitive
22 worker that you may have some health effects. And
23 because 75 is larger than 35, I would assume that
24 you might have some exposure, even though that is
25 a one-time exposure. I would think that possibly

1 some sensitive people might have some health
2 effects.

3 HEARING OFFICER VALKOSKY: Even to a
4 one-time transitory exposure?

5 THE WITNESS: Right.

6 HEARING OFFICER VALKOSKY: Okay. Now,
7 your definition of health effects is -- There is a
8 range of potential health effects.

9 THE WITNESS: That's right.

10 HEARING OFFICER VALKOSKY: Are you
11 defining any level of irritation as a health
12 effect, for example? And by that I'll say a
13 watery eye or --

14 THE WITNESS: Right. I would certainly
15 say that is a health effect. The question is of
16 long-term damage.

17 HEARING OFFICER VALKOSKY: Right.

18 THE WITNESS: I would say for most
19 cases, no.

20 HEARING OFFICER VALKOSKY: Okay.

21 THE WITNESS: That wouldn't be -- I
22 mean, what you just said, eye irritation, I would
23 not call that a long-term health effect.

24 HEARING OFFICER VALKOSKY: Okay. Are
25 you aware of any long-term health effects which

1 occur at a level of 75 ppm or below, based on a
2 transitory exposure?

3 THE WITNESS: I would say that just
4 based on my judgment, I would think that for most
5 people there would not be any long-term health
6 effects. I would guess that some sensitive people
7 would have long-term health effects.

8 HEARING OFFICER VALKOSKY: Okay, but
9 that is just a guess rather than --

10 THE WITNESS: That's a guess.

11 HEARING OFFICER VALKOSKY: Okay, thank
12 you. If I understood part of what you said, the
13 Department's concern is actually the reaction of
14 the public; is that correct?

15 THE WITNESS: That's true.

16 HEARING OFFICER VALKOSKY: Okay. Would
17 you agree that this reaction would likely be
18 subjective and vary from individual to individual?

19 THE WITNESS: Yes, I do.

20 HEARING OFFICER VALKOSKY: Okay. Does
21 the fact that the trigger for this event, and I'm
22 talking about the reaction of people, is unlikely
23 to happen in the first instance have any influence
24 on your opinion?

25 Let me back up. In other words, we're

1 not talking about an exposure which is certain to
2 occur, or is even certain to occur at various
3 intervals. We are talking about an exposure which
4 is unlikely to occur, if at all.

5 THE WITNESS: Okay. Now, this is where
6 I guess there's a question about likely. When you
7 talk about, say, a tank failure at the plant,
8 where all the ammonia will go into a sump that's
9 basically covered, where there's just a small
10 hole, where there's a small area that can be
11 released, I would say that's true. But then one
12 of the things that I have an issue about is the
13 transportation.

14 They're basically ignoring the whole
15 delivery of the transportation of the ammonia. So
16 if there was a release from that tank, that tanker
17 truck anywhere along to the power plant and there
18 was a release, you don't have those controls. And
19 then you're going to expose -- And you're going to
20 be closer to the population.

21 HEARING OFFICER VALKOSKY: Okay. Did
22 you hear Mr. Tyler's earlier testimony dealing
23 with, specifically dealing with the one-mile
24 distance between 280 and the plant site, that the
25 incidence of accidents, one, along that route was

1 very small; and two, any injuries, fatalities
2 resulting from such an accident were more likely
3 caused by the fact of the accident rather than any
4 ammonia spills?

5 THE WITNESS: I heard that.

6 HEARING OFFICER VALKOSKY: Did you? Do
7 you agree with that?

8 THE WITNESS: I still think -- I
9 definitely think there is a risk from accidents,
10 from auto accidents and vehicle accidents. I also
11 feel, though, there is a real risk to the
12 community if there was a release of aqueous
13 ammonia from a delivery truck while they're doing
14 the delivery, and where there are no controls.

15 HEARING OFFICER VALKOSKY: Okay. Do you
16 have any analysis to support that opinion? Any
17 quantification of the risk that you're talking
18 about?

19 THE WITNESS: I don't know. I would say
20 it's more based on my experience.

21 HEARING OFFICER VALKOSKY: Okay, thank
22 you. Thank you, sir.

23 COMMISSIONER KEESE: Then what is your
24 experience with tanker trucks releasing aqueous
25 ammonia?

1 THE WITNESS: Well, not with aqueous
2 ammonia. I know that we've had vehicle accidents
3 in San Francisco. We've had gasoline tankers
4 overturn, and they've spilled their load.

5 COMMISSIONER KEESE: Is there a
6 difference between a gasoline truck and a truck
7 that is specified by staff?

8 THE WITNESS: There is, yes. But that
9 doesn't mean that a tank can't get ruptured or an
10 ammonia tank can't get ruptured.

11 COMMISSIONER KEESE: Right. Does your
12 experience include any vehicular accidents
13 involving the types of trucks that are specified
14 in staff's conditions?

15 THE WITNESS: I am not familiar with any
16 accident in San Francisco involving those type of
17 trucks, the MC 307s.

18 COMMISSIONER KEESE: Thank you.

19 HEARING OFFICER VALKOSKY: One followup:
20 Would you agree, based on your experience, that a
21 release is a less likely event if the MC 307s are
22 used, because of their design and inherent
23 features?

24 THE WITNESS: I'm not really that
25 experienced with the differences between the

1 existing ones and the 307s, but my intuition was
2 that it would be safer.

3 HEARING OFFICER VALKOSKY: Okay, thank
4 you.

5 COMMISSIONER PERNELL: Ms. Cone, the 35
6 ppm that you're recommending, there was some
7 testimony earlier that said that this is a
8 workplace level, and I wrote down per hour. Is it
9 per hour or per eight-hour day?

10 WITNESS CONE: It's a 15-minute time-
11 weighted exposure. So in any 15-minute period, a
12 worker should not be exposed above an average of
13 35 parts per million.

14 COMMISSIONER PERNELL: Okay. And you've
15 testified that this is a recommendation, so there
16 is no San Francisco ordinance or anything that is
17 addressing these particular limits, you're just --
18 your agency thinks that it is safer for the
19 general public to have this down to 35 ppm.

20 THE WITNESS: That is correct.

21 COMMISSIONER PERNELL: Okay, and
22 Mr. Lee, you indicated that you have, on your
23 personal experience had the general public kind of
24 panic over exposures.

25 WITNESS LEE: Mm-hmm.

1 COMMISSIONER PERNELL: Were they
2 exposures to ammonia, the type of ammonia that
3 we're talking about --

4 THE WITNESS: Yes.

5 COMMISSIONER PERNELL: -- or was it to
6 gasoline or something else?

7 THE WITNESS: No, we've had people panic
8 over exposure to anhydrous ammonia.

9 COMMISSIONER PERNELL: And what was the
10 circumstances of that exposure?

11 THE WITNESS: There was a pipe rupture
12 at an ice company in San Francisco. Luckily, it
13 happened at 4:00 o'clock in the morning. We wound
14 up evacuating probably I guess five or six square
15 blocks of San Francisco to the east of that
16 facility. We wound up getting calls from the west
17 of the facility upwind, and people were concerned
18 that they were being exposed to ammonia when we
19 knew that they had minimal exposure.

20 COMMISSIONER PERNELL: So are you then
21 comparing a pipe rupture to the proposed tanks
22 that are on this project? I mean, I'm just trying
23 to see how you get from a pipe rupture to the
24 project that we're talking about, where, first of
25 all, the general public is not on the site, and

1 the -- I think the circumstances are different, so
2 I'm just trying -- I don't know how to phrase the
3 question here. I'm trying to understand your
4 personal experience and how can you relate that to
5 the proposed project that we're talking about.

6 Do you have any experience that one can
7 use as an analogy for what might happen on the
8 proposed project we're talking about?

9 THE WITNESS: Well, it's kind of hard
10 when there isn't any existing facility like that
11 now currently in San Francisco.

12 COMMISSIONER PERNELL: Well, there is
13 another one.

14 THE WITNESS: Okay, besides the one
15 that's just been put in at UCSF. I know there's a
16 lot of concern about that facility.

17 I think in general what we're talking
18 about is people's perceptions when they know a
19 hazardous materials incident is occurring near
20 them. And especially it gets worse when they can
21 sense the hazardous material. If it was a
22 hazardous material that they can't necessarily
23 know about or they can't sense, they're probably
24 not going to be that panicked, but when they
25 certainly can experience irritation to their eyes

1 and their throat at low levels, that's certainly
2 going to be a situation where there's going to be
3 panic.

4 COMMISSIONER PERNELL: Right, and would
5 you agree that if there was a spill, that the
6 effects would travel no more than a mile?

7 THE WITNESS: I would say in the
8 situation we're talking -- We're talking about an
9 aqueous ammonia tanker?

10 COMMISSIONER PERNELL: Well, I'm --

11 THE WITNESS: Releasing? Or are we
12 talking about the facility? If we're talking
13 about the facility --

14 COMMISSIONER PERNELL: I'm talking about
15 the facility.

16 THE WITNESS: Okay.

17 COMMISSIONER PERNELL: The facility, but
18 I will ask you about the tanker next.

19 THE WITNESS: Okay. If we're talking
20 about the facility, I don't think it's going to go
21 out to a mile where they would start sensing the
22 ammonia.

23 COMMISSIONER PERNELL: Right, so in
24 terms of the facility and the storage tanks with
25 the catch basin, do you have any concerns there?

1 THE WITNESS: I would think that there
2 are other measures, I think like Mr. Radis is
3 going to suggest, I think we would be supportive
4 of those. Things like putting the tanks
5 underground, just like we have over at UCSF,
6 possibly putting -- making it doubled-walled,
7 possibly having the deliveries done when the
8 traffic is not that busy. Those are things that I
9 would recommend.

10 COMMISSIONER PERNELL: You would
11 recommend those.

12 Have you or your agency recommended
13 signing off on any other facility that deals with
14 ammonia within the City?

15 THE WITNESS: You mean --

16 COMMISSIONER PERNELL: Signing off on
17 the haz mat plan, or --

18 THE WITNESS: Well, again, what the
19 Hazardous Materials Unified Program Agency does is
20 they review the RMP facilities.

21 COMMISSIONER PERNELL: Right, so that's
22 not the Health Department then.

23 THE WITNESS: That is the Health
24 Department.

25 COMMISSIONER PERNELL: That is the

1 Health Department.

2 THE WITNESS: Mm-hmm.

3 COMMISSIONER PERNELL: And they don't
4 necessarily sign off, they just review.

5 Ms. Cone, how are you?

6 WITNESS CONE: Fine, thank you. We
7 accept the risk management plan as complete.

8 COMMISSIONER PERNELL: And what happens
9 if you don't accept it as complete?

10 THE WITNESS: We work with the regulated
11 business. It's typically errors of omission. We
12 specify in our guidance what sections we want to
13 see, what discussions we would like to see in the
14 RMP, and typically what we find is that certain
15 sections or certain discussions are omitted.

16 COMMISSIONER PERNELL: So you work with
17 them to make sure that -- until you are
18 comfortable with their plan.

19 THE WITNESS: That's right, and it is
20 the responsibility of the regulated business to
21 have that risk management plan certified by, I
22 believe it's called a competent individual who is
23 familiar with the process and signs off that it's
24 complete.

25 COMMISSIONER PERNELL: Okay. And you

1 have -- Mr. Lee, you have indicated that in one of
2 your mediation -- one of your recommendations that
3 you will or you have modified that to say that,
4 review rather than approval.

5 WITNESS LEE: Right.

6 COMMISSIONER PERNELL: And, you know,
7 for the record I think the committee would want to
8 have that as a recommendation from the Health
9 Department.

10 THE WITNESS: Okay. Can I make one -- I
11 want to make a correction to my testimony. I said
12 35 ppm was -- that you could be exposed to that
13 for eight hours a day, 40 hours a week.

14 COMMISSIONER PERNELL: Oh, that's where
15 I got that eight hours a day.

16 THE WITNESS: Actually, that's -- 35 ppm
17 is the short-term exposure limit for 15 minutes.
18 25 ppm would be eight hours a day, 40 hours a
19 week.

20 COMMISSIONER PERNELL: Okay.

21 HEARING OFFICER VALKOSKY: Mr. Lee, the
22 last question or two. You indicated that one of
23 your concerns was the subject of public reaction
24 to a detectable hazardous materials release; is
25 that not correct?

1 THE WITNESS: Correct.

2 HEARING OFFICER VALKOSKY: Okay. In
3 your opinion and based on your experience, is that
4 reaction more likely at a fence line or at the
5 nearest public receptor?

6 THE WITNESS: At the fence line.

7 HEARING OFFICER VALKOSKY: The fence
8 line of the Potrero power plant or at the nearest
9 public receptor?

10 THE WITNESS: I would say that the
11 concern is going to be wherever the closest person
12 is, who is not aware of what they're being exposed
13 to.

14 HEARING OFFICER VALKOSKY: Okay. Well,
15 that certainly could be someone walking by the
16 fence line.

17 THE WITNESS: That's right.

18 HEARING OFFICER VALKOSKY: Would that,
19 in your experience, lead to a panic, even if we
20 have several people that happened to be along the
21 fence line?

22 THE WITNESS: Yes.

23 HEARING OFFICER VALKOSKY: Really?

24 THE WITNESS: Yes.

25 HEARING OFFICER VALKOSKY: Okay.

1 THE WITNESS: If they're not sure what
2 they're being exposed to, they're going to --

3 HEARING OFFICER VALKOSKY: Okay. But I
4 guess maybe we're talking about degrees of panic.
5 Are we talking about a limited number of
6 individuals panicking or a larger panic, something
7 that would clog the emergency room, let's say?

8 THE WITNESS: That's true. Okay, I
9 mean, if that's the case, where there's more of a
10 population, that's more of a chance where you're
11 going to have panic.

12 HEARING OFFICER VALKOSKY: Okay. So
13 then it would probably be at the nearest public
14 receptors.

15 THE WITNESS: Probably.

16 HEARING OFFICER VALKOSKY: Okay. Do you
17 have any reason to dispute the levels at those
18 nearest public receptors, as calculated by
19 applicant's witness in a revised aqueous ammonia
20 off-site consequence analysis, table two?

21 THE WITNESS: I don't, based on the fact
22 that this is, again, we're talking about the tank
23 at the facility versus --

24 HEARING OFFICER VALKOSKY: Right, that's
25 what we're talking about.

1 THE WITNESS: Yes, I don't have any
2 reason to disagree with those thoughts.

3 HEARING OFFICER VALKOSKY: Okay. Thank
4 you, sir.

5 I just have a couple of quick questions,
6 Ms. Cone, relating, starting with modeling. Is
7 the goal of the modeling regimen, which your
8 agency recommends, and I understand you recommend
9 the RMP comp model, is that to get an apples-to-
10 apples comparison, or is a better goal to get the
11 best results from the modeling exercise pertaining
12 to a particular project?

13 WITNESS CONE: It's both. I think our
14 main goal, based on the businesses that we do have
15 here in San Francisco, and admittedly, Mirant does
16 not fall into this category, and that's smaller
17 family-owned business, we wanted to make it as
18 easy as we could for them.

19 HEARING OFFICER VALKOSKY: Sure. But
20 again, I'm looking at in light of what you've
21 heard today from applicant's witness and from
22 staff's witness, do you think that the use of the
23 screen model has actually resulted in, has
24 actually produced results which are more
25 appropriate and more accurate to the proposed

1 project?

2 THE WITNESS: I certainly would -- I
3 certainly heard some things this evening that may
4 lead me to believe that.

5 HEARING OFFICER VALKOSKY: Okay, and is
6 this something you're going to think over, or --

7 THE WITNESS: Well, in the process of
8 reviewing the RMP, if there is an alternative
9 method used, that is part of the RMP review
10 process, yes.

11 HEARING OFFICER VALKOSKY: Okay. Good,
12 thank you.

13 Okay. Anything else? Any redirect?

14 MS. MINOR: Just one quick question for
15 Mr. Lee.

16 REDIRECT EXAMINATION

17 BY MS. MINOR:

18 Q You've indicated that you have
19 personally attended ammonia spill incidents, and
20 one in particular you talked specifically about
21 and that was the rupture of a pipe at an ice
22 manufacturing business?

23 A Right.

24 Q Do you have any information about what
25 the statistical probability was that such an

1 incident would occur?

2 A No, I don't.

3 Q Okay. And did that pipe rupture on the
4 site of the business?

5 A It was on the site of the business.

6 Q And the rupture was not contained at the
7 site?

8 A It was not contained -- You mean the
9 release?

10 Q Yes.

11 A No, it spread quite a distance.

12 Q Okay. There was no mechanism to capture
13 the spill?

14 A No. What had to happen was that the haz
15 mat team had to dress up, they had to break open a
16 door that was locked, and then they had to go and
17 close what they call a king valve, which
18 controlled the amount of ammonia going to that
19 area where it was broken, it was ruptured. But
20 that took several hours.

21 Q Okay. But in the records for DPH, there
22 was no kind of risk analysis that indicated what
23 the likelihood would be that such a rupture would
24 occur.

25 A No.

1 MS. MINOR: Okay.

2 COMMISSIONER PERNELL: Do you know if
3 that pipe was under pressure?

4 THE WITNESS: It was.

5 COMMISSIONER PERNELL: It was?

6 THE WITNESS: Mm-hmm.

7 COMMISSIONER PERNELL: Okay, thank you.

8 HEARING OFFICER VALKOSKY: Any recross?

9 MR. CARROLL: I don't know if this falls
10 into recross, but I do have one issue that I
11 wanted to raise in light of the testimony and very
12 helpful clarification in terms of recommendations
13 versus requirements and the interplay between the
14 agencies, which has led me to want to propose a
15 change to haz two.

16 HEARING OFFICER VALKOSKY: Okay.

17 Mr. Carroll, are we talking about the haz two
18 version which appears in Ms. Cone's testimony or
19 the version as proposed in staff's testimony?

20 MR. CARROLL: The version as proposed in
21 staff's testimony.

22 HEARING OFFICER VALKOSKY: Okay.

23 MR. CARROLL: Although I don't know that
24 it's different.

25 HEARING OFFICER VALKOSKY: Okay, go

1 ahead.

2 MR. CARROLL: Well, I guess I'm not
3 exactly clear. I'm looking at the proposed
4 modification in Ms. Cone's testimony. I'm not
5 exactly clear how that fits into the existing
6 proposed condition, but let me make my point.

7 In the third sentence of that proposed
8 condition it reads, "The project owner shall
9 include all recommendations of the US EPA, CCSF,
10 and the CPM in the final document." What I would
11 propose is that the word "recommendations" be
12 replaced with the word "requirements."

13 And the basis for that request is that
14 given the exchange that we -- the testimony that
15 we've had today and my -- the understanding that I
16 now have of how the process works with the City, I
17 think the wording of this condition essentially
18 changes that process because if we're required to
19 implement all of the recommendations, they really
20 are no longer recommendations; at that point they
21 become requirements.

22 HEARING OFFICER VALKOSKY: Okay. And
23 you would make that change while including in
24 appropriate language the change contained in
25 Ms. Cone's testimony to haz two?

1 MR. CARROLL: Yes.

2 HEARING OFFICER VALKOSKY: Okay. That's
3 the proposal. Mr. Westerfield?

4 MR. WESTERFIELD: Actually, we agree
5 with that change.

6 HEARING OFFICER VALKOSKY: Okay, the
7 change being change "recommendations" to
8 "requirements," and including language which
9 captures the intent of Ms. Cone's proposed change
10 to haz two; is that correct?

11 MR. WESTERFIELD: Mm-hmm.

12 HEARING OFFICER VALKOSKY: Okay. Any
13 objection to that? And again, we don't have to --
14 I don't need unanimity right now, I'd just like an
15 indication if that's going to cause problems for
16 anyone.

17 MS. MINOR: I'd actually like to get a
18 comment from Ms. Cone.

19 HEARING OFFICER VALKOSKY: Certainly.

20 Ms. Cone?

21 WITNESS CONE: I have no problem with
22 that.

23 MS. MINOR: With the change that
24 Mr. Carroll is suggesting?

25 THE WITNESS: The "requirements."

1 MS. MINOR: Okay.

2 THE WITNESS: The "recommendations" to
3 "requirements" change, I have no problem with
4 that.

5 HEARING OFFICER VALKOSKY: Okay.
6 Mr. Rostov?

7 MR. ROSTOV: I have no problem with it
8 either.

9 HEARING OFFICER VALKOSKY: Okay, good.
10 At this point recross, that was --

11 MR. CARROLL: No, nothing further.

12 HEARING OFFICER VALKOSKY: Okay.

13 Mr. Westerfield?

14 MR. WESTERFIELD: I really do just have
15 one more question.

16 HEARING OFFICER VALKOSKY: Okay.

17 RECROSS-EXAMINATION

18 BY MR. WESTERFIELD:

19 Q Mr. Lee, the incident with the pipe
20 break, do you know what kind of ammonia that was
21 that leaked from that pipe?

22 A It was anhydrous.

23 MR. WESTERFIELD: Thank you.

24 HEARING OFFICER VALKOSKY: Mr. Rostov?

25 MR. ROSTOV: No.

1 HEARING OFFICER VALKOSKY: Is there any
2 reason that anyone has that we could not excuse
3 Ms. Cone and Mr. Lee at this time and continue
4 with Mr. Radis?

5 MR. CARROLL: No.

6 HEARING OFFICER VALKOSKY: No?

7 Okay. The committee thanks and excuses
8 the witnesses.

9 COMMISSIONER PERNELL: Thank you,
10 Ms. Cone and Mr. Lee for your patience.

11 MS. MINOR: Thank you.

12 HEARING OFFICER VALKOSKY: Thank you.
13 And your endurance.

14 (The witnesses were excused.)

15 HEARING OFFICER VALKOSKY: Ms. Minor,
16 please proceed.

17 MS. MINOR: Mr. Lee is actually going to
18 stay with us.

19 HEARING OFFICER VALKOSKY: Okay.

20 MS. MINOR: I think it's helpful to have
21 our representative from the department present.

22 HEARING OFFICER VALKOSKY: They can,
23 just not the committee is going to require it.
24 It's their choice.

25 MS. MINOR: Thank you for hanging in

1 here with us.

2 DIRECT EXAMINATION

3 BY MS. MINOR:

4 Q Would you please state your name for the
5 record.

6 A My name is Steve Radis.

7 Q Okay. Are there any corrections to your
8 testimony that was filed on July 10th?

9 A Yes. In Exhibit I believe it's B, page
10 ten, tables two and three, basically the majority
11 of the modeling results are transposed between 20
12 and 30 percent increased ammonia on the table, all
13 of the numbers for 75 and 150 parts per million,
14 as well as the entries under 1000 parts per
15 million for stability, wind speed, classes, A1,
16 B1, and D4. Clearly, 30 percent aqueous ammonia
17 should have greater hazard distances than 20
18 percent.

19 HEARING OFFICER VALKOSKY: Okay.

20 Mr. Radis, I'm --

21 COMMISSIONER PERNELL: That was a little
22 fast.

23 HEARING OFFICER VALKOSKY: Yeah.

24 All right. I'm looking at page ten and
25 it's a table two, Modeling Results for 20 Percent

1 Aqueous Ammonia; am I looking at the right one?

2 THE WITNESS: Correct.

3 HEARING OFFICER VALKOSKY: Okay.

4 THE WITNESS: Just to illustrate,
5 basically, if you look at the first value under 75
6 ppm for distance it says 336?

7 HEARING OFFICER VALKOSKY: Yes.

8 THE WITNESS: You go to the next table
9 and it says 298. Those are clearly backwards.
10 The 298 would be for the 20 --

11 HEARING OFFICER VALKOSKY: Excuse me, I
12 haven't found the 298.

13 MS. MINOR: Table three.

14 COMMISSIONER PERNELL: The next table.

15 HEARING OFFICER VALKOSKY: Oh, I'm
16 sorry, yes, okay.

17 THE WITNESS: Basically, you can take
18 the entire columns for 75 ppm and 150 ppm, they're
19 transposed. And then three entries on 1000 ppm,
20 which are the -- looking up the left column under
21 stability, wind speed, A1, B1, and D4 were
22 transposed. I think I was cutting and pasting
23 about this time of night as well.

24 MS. MINOR: What we will do is file a
25 correction page. I wasn't aware until a few

1 minutes ago that this had happened, so I think we
2 need to just correct this table and we will file a
3 correction page.

4 HEARING OFFICER VALKOSKY: Okay. That
5 would be very helpful, thank you.

6 THE WITNESS: The next page, first
7 paragraph under section two, fourth line in, I
8 think I refer to the CEC staff criterion of 200
9 ppm. It's 150.

10 BY MS. MINOR:

11 Q And what page is that, again?

12 A That's on page 11.

13 Q It's page 11, the fourth line down from
14 the top, that 200 ppm should be 150 ppm; is that
15 correct?

16 A Yes, consistent with staff's criterion.

17 Q Okay. Are there any further
18 corrections?

19 A Not that I'm aware of yet.

20 Q Okay.

21 A But I'm sure somebody will point them
22 out.

23 Q Mr. Radis, would you please summarize
24 your professional qualifications and educational
25 background.

1 A Sure. I'm currently a principal of a
2 consulting firm called Rain Research Specialists
3 in Ventura, California, and prior to that I was a
4 principal with Arthur D. Little in Cambridge,
5 Massachusetts and Santa Barbara, California. In
6 that capacity -- I recently changed that job -- I
7 was responsible for the preparation of
8 quantitative risk analyses for fixed facilities
9 and transportation, including truck, rail, ship,
10 and pipeline facilities.

11 The group I worked with also prepared
12 numerous guideline books for the American
13 Institute of Chemical Engineers, Center for
14 Chemical Process Safety, which I participated in
15 the preparation of a few of those documents as
16 well.

17 I have a bachelors and a masters degree
18 in climatology from California State University at
19 Northridge, and have appeared before this
20 Commission on two siting cases in the areas of
21 hazardous materials, air quality, public health,
22 and noise.

23 Q Okay, thank you. You have prepared a
24 transportation risk analysis for this project.
25 Would you please summarize the results of your

1 transportation risk analysis.

2 A Sure. We prepared a transportation risk
3 analysis, obviously looking at aqueous ammonia
4 transport between the site and a supplier. We
5 looked at the closest one, recognizing and I think
6 mentioning in the analysis that it could come from
7 a more distant supplier.

8 The methodology followed the established
9 guidelines of the American Institute of Chemical
10 Engineers in a couple of their publications, both
11 for fixed facilities and transportation risk. And
12 consistent with other regulatory agencies in the
13 state, including the South Coast Air Quality
14 Management District and Santa Barbara County,
15 which has actually formally adopted this type of
16 approach.

17 The results of the analysis indicate
18 that we do not feel that the probability of
19 fatalities are likely; that's the advantage of
20 aqueous ammonia over anhydrous, and the reason
21 that most facilities use it. However, we do feel
22 that there is a potentially significant impact
23 associated with injuries, both minor injuries as
24 we've identified by 75 parts per million, as well
25 as more serious injuries defined by the 150-part-

1 per-million criteria.

2 Q There has been testimony already this
3 evening about your testimony. Would you please
4 highlight for us the differences and the results
5 that you've reached between the CEC staff and the
6 applicant's risk analysis.

7 A The main difference is that we consider
8 the entire transportation route. And again, I
9 mention we picked the closest supplier in San
10 Jose. Ammonia could very well come from Stockton
11 or even more distant locations.

12 In looking at the entire route, which a
13 Commission decision would cause that to occur, the
14 risk is substantially greater than that calculated
15 by both the applicant and staff.

16 COMMISSIONER PERNELL: So you did an
17 analysis from San Jose to the site.

18 THE WITNESS: Correct. Since it doesn't
19 just appear, it would be nice if it just appeared
20 at the freeway off ramp, but clearly, it has to
21 come from either a distributor or supplier
22 somewhere in the region, and San Jose being about
23 the closest one, Stockton being relatively close
24 as well, and also the main supply point for most
25 of the state.

1 We believe that if you were to
2 extrapolate the analysis conducted by staff over
3 that route from one mile to 44 miles that they
4 would exceed the criteria that they have
5 established as well.

6 BY MS. MINOR:

7 Q What additional differences are there
8 between the result or the approach that you use,
9 and this is differences between your
10 transportation risk analysis and that of CEC staff
11 and/or the applicant?

12 A They are numerous. I'm not quite sure
13 where to start. The approach that we take starts
14 with the probability of an accident, and that's
15 based on the type of road that's taken, the type
16 of route, and the distance. Clearly, accident
17 rates are expressed in terms of probability per
18 mile traveled per year. But including the entire
19 route, obviously that increases the probability of
20 an accident.

21 Secondly, we evaluate the likelihood if
22 there is an accident that there would be a
23 release. There are many accidents where there is
24 no release, and so we apply a probability based
25 specifically on the M 307 tanker truck for the

1 potential of an accidental release.

2 Once we've done that, we essentially
3 model what the hazard zones would be, and I think
4 staff somewhat mischaracterized how we did that.
5 We looked at the actual area covered by the vapor
6 cloud, which is based on the shape of the cloud
7 and the distance it's blowing. We don't just draw
8 a big circle around it and calculate that
9 everybody would be exposed.

10 Once we know what the potential exposure
11 area is, we overlay that over the population
12 density for the area, calculate the potential
13 number of people that would be exposed, whether
14 that's 75 ppm, 150 ppm, or 1000 ppm. Then we
15 apply another factor recognizing that everybody
16 exposed would experience the same health effects,
17 and essentially we assume that only ten percent of
18 the exposed population would experience adverse
19 health effects, whether it's a minor injury, a
20 serious injury, or a fatality.

21 And that's consistent with the
22 toxicology for those criteria, as well as, for
23 example, the 150 ppm value is the emergency
24 response planning guideline two level, which
25 essentially is defined as a concentration where

1 nearly all people exposed would not experience
2 irreversible serious health effects. And when I
3 say nearly all, that implies that some would be,
4 and we have taken that to be about ten percent.

5 Based on that, we put together when we
6 call FN curves, or the frequency of a given number
7 of fatalities or injuries. And that's an
8 accumulation of all of the different scenarios
9 that could occur. It's the accumulation of each
10 accident type, location, population density,
11 whether it's a leak versus a rupture, and then we
12 construct the curve based on that and compare that
13 with societal risk guidelines that are very well
14 established, as I think you've already heard.

15 Q Would you like to comment further?
16 Maybe we can go through -- Since Mr. Tyler has had
17 an opportunity to comment on your five comments
18 about the differences in the report, why don't we
19 go through and discuss a little bit further some
20 of these comments.

21 You indicated that there, in fact, had
22 been some accidents involving the transportation
23 of ammonia.

24 A Yes. I reviewed the last three years of
25 reported spills in, transportation spills for

1 California and found several aqueous ammonia
2 spills, although they're not related to power
3 plants, and one anhydrous spill, which was related
4 to a delivery from Stockton to Watson Cogeneration
5 in the City of Carson.

6 So there have been incidents, but given
7 the relatively recent use of aqueous ammonia for
8 use in SCR and the fact that these are incidents
9 that we don't expect to occur once a year, once
10 every ten years, it's not surprising that we
11 haven't seen more at this point. But as time goes
12 on, as more facilities are permitted, that
13 probability goes up and we will likely see
14 incidents related to aqueous ammonia
15 transportation related to power plants.

16 Q Now, would you help us understand the
17 probability of fatalities, particularly as it
18 relates to these things called the 512 V2 rockets.

19 A Staff in their analysis, instead of
20 looking at the location of an accident, the
21 population density, the toxicity of a material and
22 the likely number of injuries or fatalities, they
23 rely on this Davies and Lees article that
24 essentially, I think it was being misapplied here,
25 it's a scenario where they analyzed 512 V2 rocket

1 attacks on London, obviously during World War II,
2 and from that were able to calculate the
3 probability of ten or more fatalities or 33 or
4 more fatalities.

5 The problem I had with that is we're not
6 dealing with explosives in this case. We're
7 dealing with basically roadways where people could
8 be trapped in that area, where also a V2 rocket
9 analysis doesn't consider toxicity. It would
10 treat a spill of 19 percent aqueous ammonia the
11 same as it would anhydrous, and that's just really
12 counterintuitive, given that the volatility of the
13 two substances are quite different.

14 So perhaps it could be used for somewhat
15 of a screening analysis, but really shouldn't be
16 applied the way it has been.

17 Q And there has been testimony about your
18 criticism on the probability of potential
19 injuries. You found that the probability was
20 significant.

21 A Yes. I actually agreed with staff for
22 the most part that the probability of fatalities
23 is minimal, and that's clearly an advantage of
24 using something like aqueous ammonia, and why very
25 few projects are approved with anhydrous.

1 However, given the population density in
2 the City for this project in particular, there is
3 a high likelihood that you would have a
4 substantial number of injuries associated with an
5 accidental spill during transportation. Part of
6 the reason is that you have a high population
7 density. During a transportation spill, there is
8 no sump or dike to contain that spill. It's going
9 to spread out and the ammonia is going to fall
10 pretty rapidly off of that pool.

11 So you end up with relatively high
12 concentrations over a greater area than you would
13 see, for example, once it's at the facility.
14 Comparing it to societal risk guidelines, whether
15 you look at minor injuries or potentially serious
16 injuries, it does exceed those special criteria
17 where additional mitigation would be warranted.

18 Q Okay. Let's turn quickly to the
19 facility risk analysis and summarize the results
20 of that facility risk analysis.

21 A I generally concur with staff. Once the
22 ammonia is in the tanks, the likelihood of a
23 catastrophic accident is fairly low. However, I
24 have some disagreements on the modeling
25 methodology used, specifically related to

1 comparing modeling results of screen three, which
2 assumes an hour-long average to short-term
3 exposure criteria.

4 And basically, when you model an hour
5 average, there are factors in there to account for
6 wind meandering and really not continuous
7 exposure. And if you were to adjust the modeling
8 to account for peak exposure, the modeling results
9 yield higher concentrations.

10 I believe my results were slightly
11 higher because I modeled a half-hour exposure
12 versus an hour, and so I can't remember the
13 percentage but it was somewhat greater than what
14 the applicant and staff had produced.

15 In addition, there are potential
16 releases from the truck on the site prior to being
17 in the loading area. I mean, it has to get
18 through the gate, navigate to where it's going to
19 unload, and there are potential accidents that can
20 happen. There are also minor incidents that can
21 occur, as I think we've heard -- piping failures
22 and the like -- that also do contribute a little
23 bit to risk.

24 Q You make a series of -- Assuming that
25 the risk is significant, you then make a series of

1 recommendations as to how to mitigate the
2 significance of the risk. Would you go over
3 those, please.

4 A Sure. There are actually numerous ways,
5 and it's not necessarily all inclusive, it's kind
6 of a mix and match. They're all somewhat
7 effective. One way to do it is to bury the tank,
8 put it underground. This is something that's
9 practiced by, was practiced by Southern California
10 Edison. I believe their former generating
11 stations at Redondo Beach, El Segundo, Etawanda,
12 and Alameda all had buried tanks with 19 percent
13 aqueous ammonia.

14 The tanks typically have an outer shell
15 of fiberglass, sensors in between, so they're able
16 to detect any small leaks and they don't have any
17 problems with soil contamination. To my
18 knowledge, to date there have been no problems
19 with those tanks.

20 A double-walled tank, again, it's
21 something that's practiced more commonly with
22 anhydrous, although -- and when I say double-
23 walled containment, that could be a double-walled
24 tank or an enclosure around the vessel which
25 essentially precludes leaks from the inner tank

1 from basically drifting off site.

2 Frequently there are ammonia detectors
3 again, so they know that there is a leak
4 occurring. If it's a double-walled vessel, that's
5 going to be taken out of service before there is
6 any breach of the outer shell. If it's an
7 enclosure, there are measures that can be taken,
8 anywhere from a scrubber to a water-spray-type
9 system.

10 For this particular project, where you
11 have a sump, you have a very small area where the
12 vapors would basically vaporize out of that sump.
13 A water spray system would probably be quite
14 effective, and you would not need a large volume.
15 The rate of vaporization out of the sump is
16 relatively low, which again is the advantage of
17 having a sump.

18 You could calculate about how much water
19 you would need, which would be about a ten-to-one
20 ratio to the amount of ammonia vapor that would
21 exit the sump. And so I think what we're really
22 talking about is a really modest water spray
23 system focused on the sump areas and where the
24 drains are.

25 I think that's it.

1 Q There was discussion about the potential
2 use of a weaker aqueous ammonia solution. You
3 acknowledge in your testimony, at least on
4 Exhibit B, that this recommendation would increase
5 the number of truck trips.

6 A Correct. It's somewhat of a tradeoff.
7 It clearly further minimizes any perception or any
8 risk at the facility and any perceived risk by
9 substantially reducing the vaporization rate from
10 the sump. During transportation, the risk is
11 lower but not substantially, because you do
12 increase truck trips by about a third. And
13 clearly, your accident rate goes up, so you have a
14 higher likelihood of an accident, but smaller
15 consequences.

16 And typically, if you look at the FN
17 curves, they parallel each other pretty closely.
18 But again, 19 percent would be a little bit safer.

19 COMMISSIONER PERNELL: In terms of the
20 transportation?

21 THE WITNESS: In terms of
22 transportation.

23 COMMISSIONER PERNELL: My question is,
24 is it a difference in terms of the tanks on the
25 site?

1 THE WITNESS: Sure, the risk would go
2 down as well. Because in the event of, again,
3 looking at a worst-case spill, a tank rupture, the
4 rate that the ammonia would vaporize out of the
5 sump would be substantially lower.

6 COMMISSIONER PERNELL: Yeah, but the
7 likelihood of a tank rupture, as was discussed
8 earlier, is very minimal. I mean, somebody talked
9 about a plane crash and something else.

10 THE WITNESS: I think that was the
11 double-tank rupture, which I would agree. In the
12 absence of a substantial external event, typically
13 what you do to calculate a double-tank failure
14 would be to multiply the failure rate and whether
15 or not you believe that rate is one in 10,000
16 years or one in a million years. When you double
17 that rate, you're talking about something that
18 should not occur in a billion years.

19 So yes, simultaneous failure of two
20 tanks, in the absence of external forces, would be
21 minimal. There still is a potential for a failure
22 of a single tank.

23 COMMISSIONER PERNELL: But what you're
24 really talking about is the transportation.

25 THE WITNESS: Correct. The greatest

1 hazard is from transportation.

2 COMMISSIONER PERNELL: I'm sorry, go
3 ahead, Ms. Minor.

4 MS. MINOR: Okay.

5 BY MS. MINOR:

6 Q You also recommend urea-based ammonia on
7 demand, and indicate that a urea-based system
8 would, in fact, eliminate the staff's
9 recommendations of conditions of certification haz
10 two, haz three, haz four, haz five, haz six.

11 Would you comment more specifically on
12 your recommendation to use urea on demand.

13 A Clearly, avoiding the use of ammonia,
14 you avoid the risk. Transportation risk would be
15 limited, as the staff's witness testified to, to
16 strictly the injuries and accidents that would
17 occur during any truck trip, without being killed
18 from an ammonia release, for example. On-site
19 risk would be limited to the point between where
20 ammonia is actually created to injection in the
21 stack, and that's a scenario given the low flow
22 rate of ammonia that would be insignificant and
23 probably wouldn't result in anything more than
24 transient odors off site in the event of a
25 release.

1 So really, the urea-based system
2 eliminates all ammonia-based risk. And I think,
3 as we heard, it even --

4 COMMISSIONER PERNELL: Excuse me, what
5 system, again?

6 THE WITNESS: The urea-based ammonia
7 system, where there is ammonia on demand or --

8 COMMISSIONER PERNELL: Oh, okay.

9 THE WITNESS: There are a couple --

10 COMMISSIONER PERNELL: This is the
11 pellets?

12 THE WITNESS: It's the pellets -- Some
13 people use a solution, but the pellets would
14 probably be most appropriate.

15 COMMISSIONER PERNELL: Okay.

16 BY MS. MINOR:

17 Q Do you have any further comments on the
18 staff's witness's testimony commenting on your
19 testimony?

20 A I think I've hit on quite a few,
21 actually. I think specific ones that I wanted to
22 kind of touch on were -- there was a comment about
23 the ambiguity of injuries in a risk analysis, and
24 essentially, we calculate the probability of an
25 injury the same way we do a fatality. It's based

1 on the toxicity of ammonia, the potential for
2 exposure.

3 We don't take into account whether or
4 not somebody goes to a hospital. We recognize
5 that people who experience eye irritation will
6 more than likely seek medical help in this type of
7 accident. But as I mentioned, we look at the
8 consequences of a release, and the probability of
9 exposure, and then the probability that they would
10 experience that health effect.

11 So we're not just guessing at injuries.
12 It's the same exact calculation as we use for
13 fatalities. And it's the same methodology that's
14 again recommended by several agencies and the
15 American Institute of Chemical Engineers.

16 I had a comment about cumulative. I
17 don't want to harp on that too horribly much, but
18 under the California Environmental Quality Act,
19 it's pretty clear that cumulative assessment
20 should evaluate all reasonably foreseeable
21 projects, and I think it's pretty simple that
22 anything where there is an application or a
23 project that's approved but not yet built or under
24 construction, those are all projects that are not
25 in the base line risk, that are out there that

1 contribute to risk.

2 Granted, they will contribute to risk a
3 block away from this facility, but they do result
4 in a substantial amount of ammonia transportation,
5 mainly at the supply plants and distributors. So
6 there is an element of risk that has not been
7 evaluated that really should, just to meet the
8 requirements of CEQA.

9 Q Do you have any comments on the staff's
10 view that the Department of Transportation's
11 guidelines for transport of hazardous materials on
12 highways has already been taken into consideration
13 and, therefore, it was not necessary to further
14 assess those risks in performing a transportation
15 risk analysis? And I hope I have not
16 mischaracterized their testimony.

17 A I don't think it absolves you of not
18 looking at the risk. I mean, clearly measures
19 taken by the Department of Transportation as well
20 as state agencies, from CalTrans to the Highway
21 Patrol, are helping to minimize transportation
22 risk. But the risk is still there, and so we
23 can't just assume that because there are existing
24 regulations out there that that prevents accidents
25 from happening. Clearly, they continue to happen,

1 and the risk needs to be evaluated.

2 A lot of those guidelines are reflected
3 in accident rates. Now, granted, accident rates
4 tend to be historical and may not reflect more
5 recent regulations, but again, they provide a good
6 estimate of what the likelihood of an accident
7 would be, and it's clearly not a zero. I mean,
8 accidents are continuing to happen.

9 Q Any further comments on Mr. Tyler's
10 testimony?

11 A I don't think so.

12 Q Any further comments at this point?

13 A I don't believe so.

14 Q Okay, good.

15 MS. MINOR: Thank you.

16 HEARING OFFICER VALKOSKY: Mr. Carroll,
17 cross-examination?

18 MR. CARROLL: Just a couple of things.

19 Good evening, Mike Carroll.

20 CROSS-EXAMINATION

21 BY MR. CARROLL:

22 Q You made a couple of qualitative
23 statements in your testimony tonight, and there
24 are also some qualitative statements in here, and
25 I think I know the answer to this question but I

1 want to make sure that I understand it from a
2 quantitative point of view, and I'm talking now
3 about the transportation risk analysis that you
4 did, and I'm looking at the fatality risk profile
5 in figure five and the text that goes along with
6 that.

7 Am I correct that what you concluded was
8 that the risk of fatality was below the
9 significance levels that the Energy Commission had
10 identified, and by that I mean the ten in a
11 million for ten deaths and one in a million for
12 100 deaths?

13 A I believe if I were to extrapolate, and
14 I don't really like to do that because I disagree
15 with the methodology, but if I extrapolate their
16 analysis from one mile out to 44 that it would, in
17 fact, be significant, and would probably I think
18 just warrant further analysis to determine that
19 that's really the case.

20 Q Okay, but I wasn't talking about
21 extrapolating about their analysis, I was
22 specifically looking at your own analysis and the
23 conclusions set forth in figure five. And again,
24 you know, pardon my constraint here, as I'm not
25 sure that I understand exactly how to read these

1 figures, but if I am reading it correctly -- I'm
2 sorry, it's table five of Exhibit B attached to
3 your prepared testimony.

4 A Table five.

5 HEARING OFFICER VALKOSKY: You're
6 talking about figure five.

7 MR. CARROLL: I'm sorry, figure five, my
8 apologies.

9 HEARING OFFICER VALKOSKY: All right,
10 let me back up here.

11 THE WITNESS: Yeah, based on my
12 interpretation of extrapolating the staff's
13 analysis to the full transportation route, they
14 would exceed their criteria of one in 100,000
15 probability of ten exposures. So you wouldn't see
16 that on that figure. My figure actually differs
17 from theirs, based on the fact that I'm using a
18 different methodology.

19 BY MR. CARROLL:

20 Q Okay, right, and my question relates to
21 your methodology, not to the staff methodology.

22 A Right. Under my methodology, their
23 thresholds for fatalities would not be exceeded,
24 which again kind of goes back to the assumption
25 they use on the V2 rocket attacks.

1 Q And that's for your analysis of the
2 entire route.

3 A Correct.

4 Q Okay.

5 A Now, comparing it to societal risk
6 guidelines, it falls in the grey region, which,
7 for example, Santa Barbara County has classified
8 that as significant requiring additional
9 mitigation.

10 Q Okay.

11 A So it's not completely unacceptable, but
12 it's in a grey region where it's of concern and
13 they would add additional mitigation.

14 Q But it's below the levels that the CEC
15 is using in this case.

16 A It is below, and, as I've stated, I hope
17 quite clearly, I don't believe fatalities are the
18 issue here, it's injuries.

19 Q Okay. Well, let me ask a question about
20 that, then, and thank you for your answer on the
21 fatalities. Am I correct in understanding, if we
22 sort of flip back to figures four and three, that
23 you're applying essentially the same level of
24 significance to what you characterized as the
25 serious injury risk profile and the injury risk

1 profile?

2 A There are two orders of magnitude
3 different than the fatality criteria. If you look
4 at figure five, we have the de minimis defined on
5 the left axis as one times ten to minus five, the
6 one being cut off here, whereas on injuries, we
7 define that as one times ten to minus three.

8 So the criteria are different for
9 injuries versus fatalities.

10 Q Okay. Then help me understand, I'm
11 going to the text now on page 11, at the very
12 bottom, and this is where you're explaining your
13 results on the three scenarios --

14 A Correct.

15 Q -- "The ammonia transportation" -- I'm
16 reading at the last bullet point -- "The ammonia
17 transportation risk from the Potrero project would
18 exceed the significance threshold of one in
19 100,000 for ten exposures; more than 70 exposures
20 would occur."

21 So, and I understand you've got two
22 criteria that you're working off from here. I'm
23 focused on the CEC's criteria. When you're
24 evaluating the risk against the CEC's criteria, it
25 appears to me, and correct me if I'm wrong, that

1 you're using the same level of significance for
2 fatality as you are for the serious injury and the
3 injury. In other words, it appears to me that
4 what you're saying is that a risk of ten in a
5 million, that there will be ten deaths is
6 significant, and a risk of ten in a million that
7 there will be ten people with watery eyes is
8 significant.

9 And if I'm correct in that, then my
10 followon question would be wouldn't it make sense,
11 or wouldn't you use different levels of
12 significance for different outcomes? In other
13 words, a much lower level when you're talking
14 about death and a higher acceptable level when
15 you're talking about, again, what you've called
16 injury at the 75 ppm level?

17 A Right. What we've got here are, and I
18 actually think I might have pulled this out of
19 another siting case where we did look at
20 injuries -- Actually, let me take two minutes and
21 look at the staff's testimony.

22 That's correct. I used what they used
23 for fatalities, although I applied it to injuries.
24 Although I really base my analysis not on those
25 probabilities, but the societal risk guidelines,

1 because, A, I don't think they're completely
2 consistent, and they don't have applicable
3 guidelines for the injury thresholds.

4 Q Okay, thank you.

5 MR. CARROLL: Those were the only
6 clarifications I needed.

7 HEARING OFFICER VALKOSKY: Mr. Radis,
8 your last answer unsurprisingly confused me.
9 Could you give me some numbers, in light of your
10 last statement about what you're looking at as a
11 risk criteria for one, injuries, and then two,
12 fatalities.

13 THE WITNESS: I actually based my entire
14 analysis on societal risk guidelines. I mentioned
15 the staff criteria only because staff uses them
16 and I try and make some comparison. But I'm going
17 with what is generally accepted in the
18 international community for societal risk and
19 acceptable risk levels.

20 So I just made the comparison to their
21 risk levels, but I based my findings on basically
22 accepted societal risk guidelines.

23 HEARING OFFICER VALKOSKY: Okay, and
24 your findings reflect what numbers?

25 THE WITNESS: Well, I guess I could give

1 you an example. Using the figure four, the
2 societal risk guidelines for de minimis risk are
3 essentially defined roughly by ten serious
4 injuries at one in 100,000 exposures, or, I'm
5 sorry, a probability of one in 100,000. That's
6 similar to what staff has used in their analysis,
7 but for fatalities. But the published guidelines
8 actually use that for injuries.

9 HEARING OFFICER VALKOSKY: Okay. Which
10 brings me to my next question: What is the
11 definition of injury that you're using for that,
12 or that they've used in the guidelines?

13 THE WITNESS: For serious injury I use
14 the emergency response planning guideline level
15 two, which I think I've mentioned is defined as a
16 level where nearly all individuals would escape
17 without serious irreversible injury.

18 HEARING OFFICER VALKOSKY: Okay.

19 THE WITNESS: And by using that value,
20 we assume that only ten percent of the population
21 exposed would experience serious health effects,
22 whereas the other 90 percent would not.

23 HEARING OFFICER VALKOSKY: Okay.

24 Although there would be detectable symptoms, the
25 full throat, throat, eyes, other things like that.

1 THE WITNESS: Yeah, at 150 parts per
2 million they're going to very unhappy.

3 HEARING OFFICER VALKOSKY: Right,
4 exactly.

5 THE WITNESS: But the effects would be
6 reversible, whereas that particular guideline
7 clearly states irreversible health effects.

8 HEARING OFFICER VALKOSKY: Okay. Thank
9 you for that clarification. Now, do I also
10 correctly understand your testimony that regarding
11 ammonia, the greatest risks or the greater risks
12 are from transport rather than storage in this
13 case?

14 THE WITNESS: Yes.

15 HEARING OFFICER VALKOSKY: Had you --
16 Given that, do you think it would be preferable to
17 focus any additional mitigation efforts on
18 transportation?

19 THE WITNESS: It would make sense to
20 focus most of the effort on transportation.

21 HEARING OFFICER VALKOSKY: Okay. In
22 that vein, is there any particular priority to the
23 measures that you have suggested?

24 THE WITNESS: Avoidance would be number
25 one. Flat-out non-use of ammonia when there are

1 alternatives that are available.

2 COMMISSIONER PERNELL: Let me interrupt
3 for a minute. Do you have any knowledge of the
4 alternative technology being used on a large scale
5 of a plant of this size?

6 THE WITNESS: I don't have exact sizes,
7 but let me find something in my testimony here
8 that I think can clarify that a little bit.

9 COMMISSIONER PERNELL: I don't mean to
10 take you away from Mr. Valkosky's question.

11 THE WITNESS: I still have that one
12 flagged here.

13 I talked to a couple of vendors about --

14 COMMISSIONER PERNELL: Vendors?

15 THE WITNESS: Vendors -- about systems
16 they had sold. These are -- They're operating.

17 COMMISSIONER PERNELL: Right.

18 THE WITNESS: So this is not -- I don't
19 want to talk to vendors and get their opinion,
20 because I -- they'd love to be here right now
21 telling you how great it is, which they told me
22 how great it was. And I've listed several.

23 One is on page 19, and this would be of
24 Exhibit B, and it continues on to page 20.

25 Actually, starting on page 20, AES has acquired

1 the units, I understand they're not operational in
2 Huntington Beach, but they are going to use them.
3 I understand that they have operating units at
4 Alamitos Unit Six. Allegheny has two facilities
5 in West Virginia. Again, those are boilers, but
6 they're pretty large-scale boilers. I can't
7 remember the megawatt size, but I want to say
8 they're hundreds to a thousand is the range that I
9 think we're looking at, so they're large.

10 There is another one in Michigan on
11 several units, as well as Constellation Power has
12 two in Maryland. Additionally, it's my
13 understanding that Orion Energy, prior to being
14 purchased by Reliant, installed urea-based ammonia
15 systems at their Ceredo generating station in West
16 Virginia. That's six GE model 7EA combustion
17 turbines in simple-cycle mode. And I point that
18 out only because that's a mode where clearly these
19 are going to be ramped up and down, and again, I
20 don't want to repeat too much of what the vendors
21 say, but they say there is no problem tracking
22 load up and down.

23 COMMISSIONER PERNELL: All right, but
24 simple cycle is how many megawatts?

25 THE WITNESS: I do not know how many

1 megawatts the 7EA turbines are.

2 I also understand that the Orion Astoria
3 generating station -- Again, that's a boiler of
4 rather large size, it's coal-fired -- uses urea to
5 ammonia.

6 University of California at Los Angeles
7 has one. I'm sure that's on a very small cogen
8 plant. And the Kauai Power Partners recently
9 installed one on an LM 2500 turbine.

10 COMMISSIONER PERNELL: All right. On
11 your list I see two, and I'm specifically talking
12 about California --

13 THE WITNESS: Okay.

14 COMMISSIONER PERNELL: -- and I see two
15 AES plants, one in Huntington Beach, and the other
16 in, what is that, Alamitos. And so, to your
17 knowledge, are they -- I heard testimony today
18 that Huntington Beach is not up and running yet,
19 and what about the other facility?

20 THE WITNESS: My understanding is that
21 the rest are up and operating.

22 COMMISSIONER PERNELL: The one in
23 California, Alamitos?

24 THE WITNESS: Alamitos, correct.

25 COMMISSIONER PERNELL: How big is that

1 unit?

2 THE WITNESS: I'm not real sure. My
3 guess is being at Alamitos, probably an older
4 boiler, similar of size to Huntington Beach would
5 be my guess. They're the same, air power plant.

6 COMMISSIONER PERNELL: So it was a
7 retrofit?

8 THE WITNESS: I believe that yes, the
9 SCR was a retrofit. They had previously installed
10 SCR at several of the units, and then I believe
11 recently went back and installed one on Unit Six.

12 COMMISSIONER PERNELL: Okay.

13 Mr. Valkosky.

14 HEARING OFFICER VALKOSKY: Oh --

15 COMMISSIONER PERNELL: I'm sorry about
16 that.

17 HEARING OFFICER VALKOSKY: --
18 transportation mitigation.

19 COMMISSIONER PERNELL: Good memory.

20 THE WITNESS: Staff has already imposed
21 I believe in one of their measures the M 307
22 tanker truck, so that makes a done deal.

23 Driver hiring and training, as well as
24 inspection and maintenance, that's obviously not
25 something that the applicant is going to do, but

1 they can achieve that by either hiring certified
2 drivers, whether it's California Fertilizer
3 Association or I believe Highway Patrol now is
4 certifying some companies, and they can require
5 that as part of the procurement process for
6 ammonia, that the suppliers provide them with
7 written documentation that they do, in fact, have
8 driver hiring and training programs that are
9 written and followed, as well as written
10 inspection and maintenance procedures, not just
11 fix it when it's broke, but actual procedures for
12 inspecting all of their trucks, similar to what
13 aircraft undergo.

14 HEARING OFFICER VALKOSKY: Okay. At any
15 specific interval, or --

16 THE WITNESS: It's really a function of
17 the component of the truck. I mean, I know they
18 do visual inspections every time they take the
19 truck out, but there are periods where they need
20 to go and inspect brakes and other components of
21 the truck that are not readily visible. I don't
22 right here have the interval, but it's going to be
23 a function of what they expect.

24 HEARING OFFICER VALKOSKY: Okay.

25 THE WITNESS: Daytime deliveries,

1 whether it's a weekend, that might be a function
2 of what the traffic patterns are specifically, but
3 clearly, avoiding nighttime you avoid driver
4 fatigue and periods where there is poor dispersion
5 and poor visibility.

6 HEARING OFFICER VALKOSKY: So that would
7 be more important than having it on weekends or
8 holidays, restricted to weekends or holidays?

9 THE WITNESS: Well, if traffic is worse
10 on weekends, which I know it can be, then that
11 would be more important, clearly. The intent is
12 to avoid conditions that lead to increased
13 likelihood of an accident, as well as conditions
14 where the vapors would travel further, which we've
15 heard, or at nighttime, typically. It's clearly
16 more effective during the daytime to avoid the
17 consequences.

18 The 20 percent, I think the risk
19 analysis pretty much shows that while it's better,
20 it's not so substantial that -- I think it's more
21 of a preference of the committee and the
22 Commission, other agencies and other facility
23 owners have made decisions to go with lower
24 strengths. South Coast Air Quality Management
25 District strongly encouraged their 20 percent.

1 Southern California Edison voluntarily went 20
2 percent on all their generating stations before
3 they sold them.

4 HEARING OFFICER VALKOSKY: Okay. Are
5 you finished?

6 THE WITNESS: Yes.

7 HEARING OFFICER VALKOSKY: Thank you,
8 sir. Two more questions. As I understand your
9 suppression spray at the plant site regarding the
10 containment area to be limited to only over the
11 sump vents and drains?

12 THE WITNESS: Or over the general
13 containment structure area, but clearly you focus
14 it on the sump drains, that's where the vapors are
15 going to come from. Granted, when you spill it,
16 especially if the pavement is warm, you're going
17 to have quite a bit of emissions from the surface
18 of the spill. But the vast majority of the mass
19 that would eventually be released would come out
20 of the sump.

21 And by concentrating spray on the sump
22 areas, you would substantially reduce the
23 emissions of ammonia.

24 HEARING OFFICER VALKOSKY: Okay, and
25 lastly, I believe I heard you say that one of the

1 risks inherent in transportation is the fact that
2 there could be a release from a tanker truck from
3 the time it enters a plant gate to the time it
4 gets to the unloading containment area; is that
5 correct?

6 THE WITNESS: Correct.

7 HEARING OFFICER VALKOSKY: Could you
8 quantify that probability?

9 THE WITNESS: Quite low. I mean, you
10 basically could calculate the likelihood of
11 different component failures during the period
12 that it would be there, say an hour, and then 70
13 deliveries, you're only talking 70 hours per year.
14 For a catastrophic release, you're probably
15 talking on the order of, you know, one in 100,000
16 years, maybe slightly higher than that.

17 HEARING OFFICER VALKOSKY: Okay.

18 THE WITNESS: Not something you'd expect
19 to see, but clearly can happen.

20 HEARING OFFICER VALKOSKY: Yes.
21 Certainly, it can happen. I don't think anyone
22 would disagree with that proposition.

23 Thank you, sir.

24 Cross-examination?

25 MR. WESTERFIELD: Yes.

1 Mr. Radis, Bill Westerfield for the CEC
2 staff. Hello, good evening. Thank you for your
3 patience at all of our inquisitiveness, and it's
4 late and I'm getting a little fuzzy, so forgive me
5 if I'm confused about some of the facts. I'll do
6 my best to give them out as clearly as I can.

7 CROSS-EXAMINATION

8 BY MR. WESTERFIELD:

9 Q If I could direct you to your testimony
10 at page three, lines 11 through 13, or should I
11 say 12 and 13, just one sentence that begins with
12 "Over the past three years, 13 aqueous ammonia
13 truck spills have been reported in California."

14 A Okay. I'm sorry, what page was that?

15 Q On page three, I believe of your
16 testimony --

17 A Okay.

18 Q -- on lines 12 and 13. And staff has
19 been confused about where you got that
20 information, and so we'd like to look it up
21 ourselves, so how can we do that?

22 A I was in the HMIS database, '99 through
23 2001.

24 Q Okay, HMIS.

25 A Right, HMIS, I believe, and that was for

1 tanker truck trips either originating or
2 terminating in California, and I believe of those
3 the 13 were actually spills within California.

4 Q Originating or terminating.

5 A Correct, and the spills I believe
6 occurred -- There are a lot of trips that
7 originated out of California, but the spills
8 occurred out of state.

9 Q Oh --

10 A Because there's obviously a lot of
11 transport out of state as well, out of the Port of
12 Stockton.

13 Q Okay. So these were reported in
14 California, not necessarily in California.

15 A Well, if they were reported in
16 California, then I'm assuming they occurred here.

17 Q Okay.

18 A But, I mean, yeah, they didn't occur in
19 another state. They list it by where the spill
20 occurs. They also list the originating point and
21 the destination.

22 Q Okay.

23 COMMISSIONER PERNELL: Is that a
24 national --

25 THE WITNESS: It's a national database,

1 Department of Transportation.

2 COMMISSIONER PERNELL: Right, but I
3 guess my question is, is that all of the United
4 States in the time period that you're talking
5 about?

6 THE WITNESS: The database is all of the
7 United States but can be sorted by state. And so
8 what I did is I eliminated the other 49 states,
9 and analyzed only the spills in California for
10 ammonia, and specifically in that case, aqueous
11 ammonia.

12 COMMISSIONER PERNELL: But then you said
13 originated or ended in California. So if it
14 originated in California but spilled somewhere
15 else, you counted that.

16 THE WITNESS: No, I only counted the
17 spills in California.

18 COMMISSIONER PERNELL: Okay.

19 THE WITNESS: But, as you search through
20 the database, you have to weed through because
21 there are a lot of entries for California that
22 don't apply.

23 COMMISSIONER PERNELL: Right.

24 BY MR. WESTERFIELD:

25 Q Okay, and did all of these occur on the

1 highway, were all of these highway spills?

2 Traffic accidents?

3 A They were truck spills.

4 Q Truck spills.

5 A Truck spills. They don't necessarily
6 say whether it was highway, but they're in a DOT
7 database, so you can assume that most of them are
8 on the highway.

9 Q But do you know whether they were on the
10 highway or not?

11 A Not all of them.

12 Q Okay.

13 A Some I know because I know of the
14 spills.

15 Q Okay, and first off, do you have the
16 documentation that you received from the database
17 about these 13 spills?

18 A I have the electronic files, yes.

19 Q Have you included hard copies of that
20 information as backup to your testimony?

21 A No.

22 MR. WESTERFIELD: We're requesting that
23 support for the witness's testimony at this time.
24 It doesn't have to obviously be produced now, but
25 we think that's important information for us to be

1 able to cross-examine him on the basis for, the
2 factual basis for this testimony.

3 THE WITNESS: I don't have a hard copy.
4 No, it's huge. It's, like, 15,000 entries.

5 BY MR. WESTERFIELD:

6 Q Well, all we need is the 13 that
7 involved California. That's all we're interested
8 in.

9 A I don't have it with me.

10 Q No, I didn't think you did, but we're
11 asking that the City produce that.

12 A Oh, yes, not a problem.

13 MS. MINOR: How long would it take you
14 to get it to me?

15 THE WITNESS: A couple of days.

16 MS. MINOR: Okay.

17 We'll have it to you in a week.

18 MR. WESTERFIELD: Thank you.

19 BY MR. WESTERFIELD:

20 Q Now, Mr. Radis, you were about to tell
21 me about the ones you knew about that I believe
22 were on the highway.

23 A The one specific one was the anhydrous
24 spill which was on I-5.

25 Q Okay. Now, wait a second, I thought you

1 testified that over the past three years there
2 were aqueous ammonia truck spills reported in
3 California. You just referenced an anhydrous
4 spill.

5 A In terms of all the ammonia spills that
6 I know, that's the one I know most of the details
7 on.

8 Q Okay. So is that part of the 13 aqueous
9 ammonia spills you were referring to in your
10 testimony?

11 A No, I don't believe so.

12 Q Okay. All right, so there is an
13 additional spill.

14 A Correct. I just bring it out because
15 that was one that was destined for a power plant.

16 Q Okay.

17 A The 13 spills, the database indicates
18 roughly where they occurred. And I think when I
19 provide that, you'll see that a lot of them are
20 not at the destination nor are they at the
21 originating point for the delivery.

22 Q Okay. And do you know if any of those
23 13 spills are on the highway?

24 A I can only presume that they were on the
25 highway, given that they were reported to DOT.

1 Q Okay. But you did just testify that you
2 knew about some of these spills.

3 A I was referring to the anhydrous spill.

4 Q Okay, so the only one -- Okay, I got it.

5 Now, you know about one anhydrous spill.
6 Do you know how many anhydrous ammonia truck
7 spills have been reported in California over, say,
8 the last three years?

9 A No, I'm not sure that I noted that.

10 Q Okay.

11 A But it's easy to find in the database.

12 Q Okay. Is the one that you're mentioning
13 on I-5 the only one you know about, or do you know
14 of any others?

15 A It's the only one I know the details of.
16 I was clearly searching for spills related to
17 power plants.

18 Q Okay. And it was on I-5.

19 A Correct.

20 Q Could you provide us documentation of
21 that spill as well?

22 A Oh, yes. It's in the database.

23 Q Great.

24 A I'll highlight it.

25 Q And how much ammonia was spilled in that

1 spill?

2 A I don't recall, but it was a substantial
3 amount.

4 Q Okay.

5 A It was a pretty major spill.

6 Q All right. Now, you actually mention in
7 the line after that that there were three
8 anhydrous ammonia spills that were reported over
9 the same period.

10 A Okay.

11 Q So is it one or three?

12 A It's three.

13 Q Okay.

14 A It's whatever I put. I couldn't recall
15 how many there were.

16 Q Okay. So you'll provide us the
17 information on all three.

18 A Yes.

19 Q Okay, that's great. Thank you.

20 Now, what is your calculation of the
21 risk from an accident and a release from an MC 307
22 DOT truck carrying aqueous ammonia? Shall I
23 repeat that for you?

24 A Yes, could you?

25 Q What is your calculation of the risk of

1 an accident and a release -- because actually, you
2 testified earlier, you said that you go through
3 the exercise of looking at the probability of an
4 accident, then you go through the exercise of the
5 probability of a release. So what is your
6 calculation of the risk from an accident and a
7 release from an MC 307 truck carrying aqueous
8 ammonia?

9 A I'm not real clear what you're asking.
10 I mean, basically, we include this in a risk model
11 and calculate the points that are then used to
12 develop the FN curve. Now, if you're asking me
13 what a given point is, I can't tell you off the
14 top of my head, I'd have to go back and
15 recalculate. But the methodology is pretty well
16 documented in my testimony, in terms of how I
17 calculate accident rates, how I calculate
18 conditional probabilities of a spill in the event
19 of an accident.

20 So I can't actually calculate a single
21 number, there is no single number that I can give
22 you.

23 Q There is no probability -- I'm asking
24 you for the results of your methodology --

25 A Right.

1 Q -- and that specific question is what is
2 the probability of an accidental release from an
3 MC 307 truck carrying aqueous ammonia?

4 A The probability would basically be if
5 you look at -- Again, it varies by part of the
6 route, it varies by accident rate. So it would
7 basically be, for example, if you were to take the
8 first segment of the route, the accident
9 probability for that 1.2-mile stretch is 3.4 times
10 10⁻⁷.

11 You would then go to the calculation of
12 what type of spill you have, so in other words, is
13 it a large spill, and if you go to page four --

14 Q Actually, I'm just talking about any
15 spill, because we're talking about an MC 307
16 truck, which I understand is a high-integrity
17 vehicle and they don't leak very easily.

18 A Correct. I did not calculate a number
19 that is just the probability of a spill from an M
20 307 tanker truck, because what we're calculating,
21 that's an intermediate number that I did not
22 calculate. It's in there, but it's an
23 intermediate step in the process of multiplying
24 out the accident probability, the spill
25 probability, the exposure probability, and the end

1 point of injury or fatality.

2 So it's an intermediate number that I
3 actually have not calculated.

4 Q I see. It sounded like you were just
5 about to start calculating it, though, 3.7 times
6 10^{-7} --

7 A Well, again, that was for one particular
8 segment. I mean, this is -- FN curve is an
9 accumulation of probabilities of injuries or
10 fatalities, and we've looked at different spill
11 sizes, we've looked at different accident rates
12 for different segments, so there is no one number
13 that I can actually give you off the top of my
14 head. It would actually take a while to calculate
15 that out.

16 And I think it's pretty clear in here
17 what we used for each probability along the way.

18 Q Sure isn't clear to me what the
19 probability is for an accidental release from an
20 MC 307 truck carrying aqueous ammonia.

21 A Well, then you have to, in terms of per
22 trip, per year, per mile, I mean, again, what
23 you're trying to get to is an intermediate step
24 that I have not calculated specifically.

25 Q Okay.

1 MR. WESTERFIELD: I would request that
2 the witness do calculate that and present that
3 information along with the written material that
4 he's promised to provide.

5 THE WITNESS: Okay. Now, specifically,
6 the probability of a release from an M 307
7 tanker --

8 BY MR. WESTERFIELD:

9 Q MC 307 truck.

10 A -- from this project --

11 Q Say from Stockton, Port of Stockton,
12 some ammonia --

13 A Let's do, since I did everything for San
14 Jose, we'll do San Jose.

15 Q We'll do it from San Jose, make whatever
16 is easiest for you.

17 A For a year, probability per year; is
18 that --

19 Q Per mile.

20 A Risk is expressed per year, because it's
21 different per mile for different parts of the
22 route. So, in other words, you want to know what
23 is the probability --

24 Q Per year; can you do it per year?

25 A I will -- No problem.

1 MS. MINOR: Is it clear to you what
2 you're being asked here, since you're being given
3 a homework assignment?

4 THE WITNESS: Yes, it's clear.

5 HEARING OFFICER VALKOSKY: Are you, in
6 fact, clear on that, Mr. Radis?

7 THE WITNESS: Well, I'm clear on what I
8 think I'm going to provide. I don't know what it
9 means, because it's really an incomplete picture
10 of what the risk is, because you -- by just
11 knowing what the probability of a spill is, you
12 still need to know what the exposure would be, how
13 many people would be exposed to get the actual
14 risk.

15 MR. WESTERFIELD: I understand that
16 there are other parts of it.

17 THE WITNESS: But I can get just the
18 probability, that's simple enough.

19 MS. MINOR: Let me say this. As far as
20 I know, we have not agreed that this topic area
21 will remain open.

22 HEARING OFFICER VALKOSKY: I think we
23 did for their --

24 MS. MINOR: Oh, is it going to remain
25 open?

1 HEARING OFFICER VALKOSKY: It will be
2 continued definitely, yes.

3 MS. MINOR: Okay, because my comment is
4 that we're certainly willing to have him produce
5 factual information, such as the database, but any
6 calculation where he is going to have to come back
7 in order to explain, answer questions, be subject
8 to cross-examination, I don't know if we've gotten
9 that far and agreed to do that.

10 HEARING OFFICER VALKOSKY: Well, this
11 topic will be continued and I guess it's my fault
12 if I wasn't clear on that earlier this morning
13 when applicant indicated that it would not be able
14 to comment on Mr. Radis's proposed conditions
15 dealing primarily with the storage of hazardous
16 materials because the feasibility and costs were
17 beyond the scope of the witnesses, and that would
18 be done in facility design.

19 MR. CARROLL: Well, let me clarify that.
20 My objection was having Mr. Lague testify to those
21 matters.

22 HEARING OFFICER VALKOSKY: Right, and
23 that it would, in fact, be done in facility
24 design, correct?

25 MR. CARROLL: Well, a couple things.

1 I'm prepared to make statements today on behalf of
2 the applicant as to which of the proposed changes
3 in facility design are acceptable or not, but to
4 the extent that there are questions about why
5 they're not acceptable, that we would need our
6 facility design expert to answer.

7 HEARING OFFICER VALKOSKY: Right. So to
8 that extent, haz mat is going to remain open.

9 And then we had a question whether
10 Mr. Lague's 525-ton calculation included duct-
11 firing, whether Unit Seven will, in fact, result
12 in an increased use of sulfuric acid. Staff has
13 some revised language to haz mat six.

14 You're going to provide the ammonia
15 storage accident database. In light of all that
16 supplemental material coming in, it seems to me
17 we're going to have to keep the topic open.

18 MS. MINOR: Okay. I think we can keep
19 the topic area open, but I'm going to object to a
20 homework assignment that's beyond the scope of his
21 testimony. If Mr. Westerfield wants to continue
22 to ask him questions to determine whether, based
23 upon the information that's in front of the
24 witness, he can answer the question, certainly --
25 We can stay here all night to do that -- but to

1 give him an assignment and ask him to come back
2 and explain it is beyond the scope of his direct.

3 HEARING OFFICER VALKOSKY: Well, one,
4 I'm not sure I would characterize it as an
5 assignment, and two, I don't know, are you going
6 to ask him to come back and explain it?

7 MR. WESTERFIELD: I'm going to ask
8 him -- I've asked him to present the information
9 with the written information that he's already
10 committed to present, and then hopefully I'll have
11 a chance to cross-examine him on the written
12 information that is the basis for his testimony,
13 and then I'll ask him questions about that
14 calculation as well.

15 HEARING OFFICER VALKOSKY: If needed.

16 MR. WESTERFIELD: I'm sorry?

17 HEARING OFFICER VALKOSKY: If needed.

18 MR. WESTERFIELD: If needed.

19 HEARING OFFICER VALKOSKY: Yes. See,
20 what will happen in the interim, and this will be
21 clear when we get around to scheduling the
22 continuation of the hearing, is that the parties
23 would have to specify if they so desire to recall
24 a witness. It's not that we will have the witness
25 show up automatically or anything.

1 So with those understandings, I believe
2 Mr. Radis said it would be no problem to provide
3 the information; was that correct, sir?

4 THE WITNESS: Yes, I can calculate it.

5 HEARING OFFICER VALKOSKY: Okay.

6 MS. MINOR: All right.

7 THE WITNESS: I could do it this evening
8 if you all want to sit around and wait for it.

9 HEARING OFFICER VALKOSKY: I don't,
10 particularly.

11 THE WITNESS: I didn't think so.

12 HEARING OFFICER VALKOSKY: Are you --
13 You may do it, maybe you can do it off the record
14 with the staff people that are asking for it.

15 THE WITNESS: Or probably at this point,
16 it would be better if I just write it up and
17 document it so it's clear, and I can refer back to
18 the testimony, where the numbers come from.

19 HEARING OFFICER VALKOSKY: Okay. If you
20 can do that, that would be appreciated.

21 MS. MINOR: Do you need the request to
22 be stated again?

23 THE WITNESS: No, I'm clear. I
24 understand, total probability for a given route,
25 with the likelihood or probability of a given year

1 of a tanker truck.

2 COMMISSIONER PERNELL: Certain type of
3 vehicle.

4 THE WITNESS: MC 307.

5 MR. WESTERFIELD: Carrying aqueous
6 ammonia.

7 THE WITNESS: It doesn't know what's
8 inside when it crashes and -- Okay.

9 MR. ROSTOV: Can I add one more item to
10 the list of things to keep open?

11 MS. MINOR: More homework for him?

12 MR. ROSTOV: No, not for him, for
13 Mirant.

14 HEARING OFFICER VALKOSKY: Well, one
15 second, Mr. Rostov.

16 MR. ROSTOV: Okay.

17 HEARING OFFICER VALKOSKY: Are you
18 finished, Mr. Westerfield?

19 MR. WESTERFIELD: I did have a few more
20 questions.

21 HEARING OFFICER VALKOSKY: Okay. Could
22 you --

23 MR. ROSTOV: I can hold it. It was just
24 on the topic of why we're keeping it open.

25 HEARING OFFICER VALKOSKY: Oh, okay,

1 excuse me. If it's on the topic, sure.

2 MR. ROSTOV: It was just they have an
3 ammonia-on-demand system at their Canal Unit One,
4 and Ms. Zambito said they would provide that
5 information. I don't think they have, and their
6 witness today didn't provide it as well. So it
7 would be nice when we do revisit this topic if
8 they could provide how big the boiler or whatever,
9 the megawatts at Canal Unit One is.

10 HEARING OFFICER VALKOSKY: Do you
11 understand what's being requested, Mr. Carroll?

12 MR. CARROLL: Yes, that's fine. And we
13 also have on our list to explain what attenuation
14 of sizenicity means.

15 HEARING OFFICER VALKOSKY: Okay. And
16 when can we look forward to the explanation of
17 attenuation of sizenicity as well as the new
18 request?

19 MR. CARROLL: We plan to provide all of
20 those things, and I have now four of them, within
21 a week.

22 HEARING OFFICER VALKOSKY: Thank you.

23 Mr. Westerfield, continue.

24 MR. WESTERFIELD: Thank you,
25 Mr. Valkosky.

1 BY MR. WESTERFIELD:

2 Q Mr. Radis, do you agree with staff's
3 conclusion that the existing DOT regulations for
4 hazardous materials transportation are effective?

5 A Well, they're effective to a certain
6 degree. They're better than -- Actually, DOT
7 regulations have been effective in reducing
8 accidents and spills, and California-specific
9 regulations have been even better in that as well.
10 So yeah, the regulations are effective in reducing
11 the probability of spills, but they're clearly not
12 complete in terms of preventing.

13 Q Are they inadequate for protecting the
14 health and safety of the people of San Francisco?

15 A It depends what you mean by inadequate.
16 Is it going to prevent an accident from impacting
17 somebody in City of San Francisco? No. Is that
18 adequate? Can you prevent it? I doubt it.

19 So it's not a simple thing, whether it's
20 adequate or not adequate. There are measures that
21 could be taken that could lower the likelihood of
22 an accident, but obviously, with any regulation
23 there are costs associated with that.

24 So I guess the answer is they could do
25 better but overall do a pretty good job,

1 especially compared to other jurisdictions.

2 Q Okay. Now, did you incorporate the
3 probability of wind in the direction of exposed
4 populations along the transportation route?

5 A Did not.

6 Q You did not.

7 A We only look at distribution of
8 stability class and wind speed, and the population
9 density and overlay that open the density.

10 Q Okay. And do you agree with staff that
11 turbulent mass transfer is not likely to occur
12 from aqueous ammonia inside a sump?

13 A I can't say I've really ever given it
14 much thought. But clearly, there is not a whole
15 lot of turbulence down there going on. What you
16 likely have is when you first would spill the
17 ammonia, you would have diffusion through the
18 water column, similar to when you open up a
19 carbonated beverage. Some of that ammonia is
20 going to want to bubble out.

21 And so that would be going on. Once
22 that process stops, really you've got very, very
23 slow diffusion out of the sump, and that's part of
24 the effectiveness of the sump is you remove
25 turbulent diffusion, meaning wind, from the

1 surface. And that slows down the release rate.

2 Q Okay. Do you agree with staff that
3 aqueous ammonia is a two-component liquid, and
4 that a whole fraction correction -- a mole
5 fraction correction should be made?

6 A That's a loaded question. Yes, it's
7 clearly two components, water and ammonia. And in
8 work we've done in the past, especially for the
9 South Coast AQMD, we actually treated spills using
10 a multicomponent spill model. And the reason we
11 do that is the initial spill is characterized by
12 substantially higher release rates than you might
13 expect, but obviously as the ammonia vaporizes
14 over time, that release rate drops significantly.

15 The EPA RMP methodology attempts to
16 account for that in that they have different
17 factors for different release durations. And
18 actually, the mass -- I think the factor is higher
19 when it's a shorter release, and then a lower
20 factor when it's a longer release. That makes
21 sense. Because really, what you're looking at is
22 how much mass is lost over time.

23 Q So is that a yes or a no?

24 A That's a yes.

25 Q Okay, thank you.

1 A It would be the proper way to treat it.

2 MR. WESTERFIELD: All right, thank you.

3 That's all I have.

4 HEARING OFFICER VALKOSKY: Mr. Rostov?

5 MR. ROSTOV: No questions.

6 HEARING OFFICER VALKOSKY: You have the
7 power now, Ms. Minor. Any redirect?

8 MS. MINOR: No (Laughing).

9 MR. WESTERFIELD: She's getting punchy.

10 (Laughter.)

11 HEARING OFFICER VALKOSKY: Mr. Radis,
12 the committee thanks you and excuses you, unless
13 you just show up again out of necessity at the
14 yet-to-be-continued hearing.

15 (The witness was excused.)

16 MS. MINOR: Have I really got to put him
17 up in a hotel again tonight?

18 (Laughter.)

19 HEARING OFFICER VALKOSKY: Off the
20 record, please.

21 (Brief recess.)

22 HEARING OFFICER VALKOSKY: Do you have
23 any exhibits to move?

24 MS. MINOR: Yes, I do. The City would
25 like to offer into evidence Exhibit 43 -- I'm

1 sorry, no --

2 HEARING OFFICER VALKOSKY:

3 Exhibit Three?

4 MS. MINOR: -- Exhibit 40, which is the
5 prepared testimonies of Sue Cone, Richard Lee,
6 Steve Radis regarding hazardous materials
7 management.

8 HEARING OFFICER VALKOSKY: Okay. Is
9 there any objection?

10 Seeing no objection, it's received into
11 evidence.

12 Is there any public comment on the area
13 of hazardous materials?

14 There is none. With that, we're
15 adjourned until 10:00 o'clock tomorrow.

16 (Thereupon, the hearing was
17 adjourned at 11:00 p.m.)

18 --oOo--

19 *****

20 *****

21 *****

CERTIFICATE OF REPORTER

I, PETER PETTY, an Electronic Reporter,
do hereby certify that I am a disinterested person
herein; that I recorded the foregoing California
Energy Commission hearing; that it was thereafter
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I further certify that I am not of
counsel or attorney for any of the parties to said
workshop, nor in any way interested in outcome of
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IN WITNESS WHEREOF, I have hereunto set
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